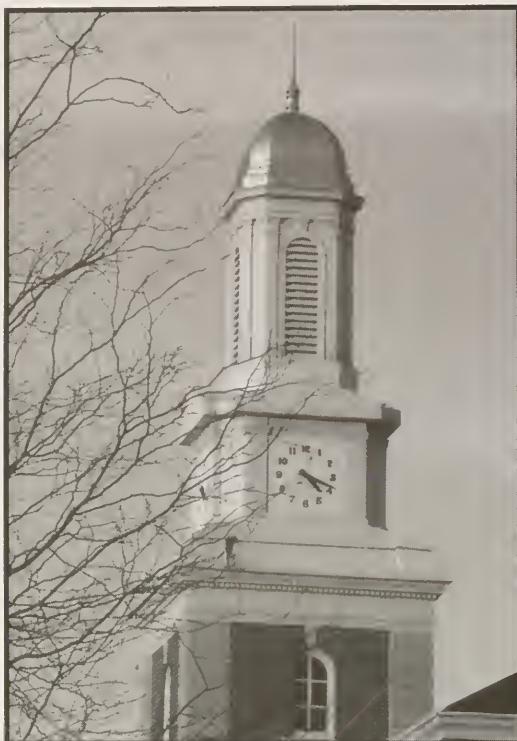


LYCOMING COLLEGE

2001 • 2002



ACADEMIC CATALOG



THE MISSION

The mission of Lycoming College is to provide a distinguished baccalaureate education in the liberal arts. This is achieved within a coeducational, supportive, residential setting through programs that develop communication and critical thinking skills; foster self-awareness while increasing receptivity to new concepts and perspectives; explore literary and scientific traditions; cultivate an aesthetic sensibility; elicit social responsibility; promote racial inclusiveness, gender equality, and an appreciation of cultural diversity; and produce leadership for the institutions of society. Each student is encouraged to develop and strengthen virtues and traits of character that enable, ennoble, and emancipate the human spirit while deepening commitment to those values that undergird civilization.

Fully accredited, Lycoming is a member of the Middle States Association of Colleges and Schools, and the University Senate of The United Methodist Church. It is a member of the Association of American Colleges and Universities, the Pennsylvania Association of Colleges and Universities, the Commission for Independent Colleges and Universities, the National Commission on Accrediting and the National Association of Schools and Colleges of The United Methodist Church.

Also, the Department of Nursing is accredited by the National League for Nursing. The Department of Chemistry is approved by the American Chemical Society to certify upon graduation those students who meet or exceed the requirements established by the Society for membership. The departments of Accounting and Business Administration are accredited by the Association of Collegiate Business Schools and Programs.

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The general regulations and policies stated in this catalog are in effect for the 2001-02 academic year. Freshmen beginning their first terms at Lycoming College in the fall of 2001 or the spring of 2002 are thereafter governed by the policies stated in this catalog.

If changes are made in subsequent editions of the catalog to either general requirements or major requirements, students have the option of following their original program or a subsequent catalog version, but the College always reserves the right to determine which requirements apply.

If a student interrupts his or her education but returns to the College after no more than one academic year has passed, he/she will retain the same requirements in effect at the initial date of entrance. A student who withdraws from the College for more than one year will, upon return, be required to complete the requirements currently imposed upon other students of the same academic level. A student who transfers to the College with advanced standing will be subject to the requirements imposed upon other students at the College who have attained the same academic level. Post-baccalaureate students will be subject to the requirements stated on page 31.

Lycoming College reserves the right to amend or change the policies and procedures stated in this catalog without prior notice to those who may be affected by them. The provisions of this publication are not to be regarded as an irrevocable contract between the applicant and/or the student and Lycoming College.

ACADEMIC CALENDAR 2001 - 2002



	Fall Semester	Spring Semester
Bills are due	August 10	December 14
Residence halls open for freshmen	August 24 at 10 a.m.	January 6 at 8 a.m.
Residence halls open for upperclassmen	August 25 at 10 a.m.	January 6 at 8 a.m.
Classes begin first period	August 27	January 7
Processing of drop/add begins	August 27	January 7
Re-registration fee of \$25 applies after this date	August 31	January 11
Last day for drop/add	August 31	January 11
Last day to elect audit and pass/fail grades	August 31	January 11
Last day for submission of final grades for courses for which Incomplete grades were recorded in Spring, May, and Summer terms	October 5	
Last day for submission of final grades for courses for which Incomplete grades were recorded in Fall semester		February 15
Mid-semester deficiency reports due in Registrar's Office at noon	October 8	February 18
Residence halls close at 6 p.m. for spring recess		February 22
Residence halls open at 10 a.m.		March 3
Classes resume first period after spring recess		March 4
Enrollment deposit deadline		March 5

	Fall Semester	Spring Semester
Last day to withdraw from courses	October 26	March 15
Last days to withdraw from half semester courses.	1st 7 weeks November 14	September 26 February 6 April 3
Residence halls close at 9:00 p.m. for Thanksgiving recess	November 20	
Residence halls open at 10 a.m.	November 25	
Classes resume first period after Thanksgiving	November 26	
Final examinations begin	December 10	April 22
Semester ends at 5:00 p.m.	December 14	April 26
Residence halls close at 6:00 p.m.	December 14	April 26

	SPECIAL SESSIONS		
	May Term	Summer Session #1	Summer Session #2
Residence halls open noon - 2:30 p.m.	May 5	June 2	July 7
Classes begin	May 6	June 3	July 8
Last day for drop/add	May 7	June 5	July 10
Last day to elect audit and pass/fail grades	May 7	June 5	July 10
Last day to withdraw from courses	May 22	June 24	July 29
Term ends	May 31	July 5	August 9
Residence halls close at 4:00 p.m.	May 31	July 5	August 9

Special dates to remember:

Freshman First Weekend August 24, 25, 26
 New Student Convocation August 24
 Labor Day September 3
 (classes in session)
 Homecoming Weekend September 21-23
 Family Weekend September 28-30
 Admissions Open House October 6
 Long Weekend (no classes) . October 19,20,21
 Science Saturday October 27
 Admissions Open House November 10
 Thanksgiving Recess November 20-25

Admissions Open House February 16
 Spring Recess February 22 - March 3
 Good Friday (no classes) March 29
 Accepted Students Day April 7
 Honors Convocation April 7
 Baccalaureate May 4
 Commencement May 5
 Memorial Day (no classes) May 27
 Independence Day (no classes) July 4

WELCOME TO LYCOMING COLLEGE



Lycoming College is a small liberal arts college dedicated to providing the type of learning that can be used for a lifetime in a supportive, residential environment that fosters individual growth and close interpersonal relationships.

U.S. News and World Report has recognized Lycoming as one of the top regional colleges in the United States. It is something that Lycoming alumni have quietly known for years. The reasons are simple.

All of Lycoming's resources and faculty are dedicated to the undergraduate education of just 1500 students. Classes are small and all faculty members teach. With a 13 to 1 ratio of students to faculty, classes of five or ten students are not uncommon, while even large introductory courses average about 30 students. This means abundant opportunities for individual attention by a faculty truly

committed to teaching. The average graduation rate for first time freshmen is 70%.

Lycoming students are superbly prepared to meet the challenges of life through an academic program that includes both breadth of study in the humanities, social sciences and natural sciences and depth of study in at least one area of concentration.

Those areas of concentration include bachelor of arts programs in 33 major fields, and a bachelor of science in three major fields.

Those who intend to continue in medicine, dentistry, law, the ministry or teaching will find excellent preprofessional preparation. Through a number of cooperative programs with other colleges and universities, Lycoming students can study engineering, forestry, environment, podiatric medicine, optometry, and medical technology—while still enjoying the benefits of a small college

experience. They can also study at Oxford Brookes University in Oxford, England; Anglia Polytechnic University in Cambridge, England; Regent's College in London, England; Lancaster University, Lancaster, England; CUEF Université Stendhal-Grenoble 3 in Grenoble, France; and Tandem International School, Madrid, Spain; or spend a semester in Washington, D.C., or New York City through a number of other cooperative programs.

One of Lycoming's most popular and successful ways of blending career planning with a liberal arts education is through its internship program. Close to one-third of Lycoming students gain real job experience as part of a semester course load. The Williamsport area is particularly rich in internship opportunities in business, communication, government, health and social services. The close relationship between the College and the community has given Lycoming students a chance to roll up their sleeves and gain resume-enhancing experience rather than mere observation.

Most students complete their program of study in four years, usually by taking four courses each fall and spring semester. However, students may take one course during Lycoming's May Term and from one to two courses in each Summer Term.

Perhaps one of the most important qualities of Lycoming is its feeling of community. Lycoming is a truly residential college where all students, with the exception of close commuters, live on campus in one of the College's residence halls or apartments.

The quality of campus life is enriched by a variety of extracurricular activities in which Lycoming students gain valuable leadership training.

Students produce a newspaper, run the campus radio station, edit a yearbook, mount theatre productions, participate in a nationally acclaimed choir and concert band, as well as organize and manage their own social



fraternities and sororities, special interest clubs and campus-wide social events.

Student athletes can try out for 19 different varsity sports (10 for men, 9 for women) or participate in the College's strong intramural program.

Students are admitted free to productions at the Community Arts Center. Student-run programs have brought in Adam Sandler, Fiona Apple, Eve6, Our Lady Peace and Brian Adams.

Lycoming's campus lies near the historic downtown of Williamsport, a city best known as the birthplace of Little League Baseball and the site of its annual international championship. The greater metro area has a population of approximately 75,000.

The rolling hills and forestlands of northcentral Pennsylvania provide some of the state's best scenery, as well as hiking, camping, kayaking, and other outdoor recreation. Yet Lycoming is less than a four-hour drive from New York City, Philadelphia, Washington, D.C., Baltimore and Pittsburgh.

The College enjoys a relationship with the United Methodist Church and supports its tradition of providing an education to persons of all faiths. The College is firmly committed to a policy of cultural diversity and expects its students to work together in an atmosphere of respect and tolerance.

HISTORY

The history of Lycoming College has been one of continual evolution. The institution has been, at one time or another, an elementary and secondary school, a seminary, a junior college and at present a four-year liberal arts college—going through three name changes in the process. Sold by the Presbyterians to the Methodists (who bought it as a source of revenue), it is today an independent non-profit, private college, affiliated with the United Methodist Church.

Its beginning dates back to 1812—making Lycoming one of the 50 oldest colleges in America—when it was founded as the Williamsport Academy, that city's first elementary and secondary school. The school was administered by a Board of Trustees made up primarily of staunch Presbyterians.

By 1848, Williamsport had its own public school system well in place, and the private school was becoming a financial burden. A visionary circuit preacher, Rev. Benjamin H. Crever, persuaded the Methodists to buy the school. They named the institution Dickinson Seminary and offered college preparatory courses. Rev. Crever is considered the school's true founder.

The seminary operated as a private boarding school until 1929 when a college curriculum was added and it became the Williamsport Dickinson Junior College, the first junior college in Pennsylvania.

In 1947, the junior college became a four-year degree-granting college of liberal arts and sciences. It adopted the name Lycoming, derived from the Indian word "lacomic," meaning "Great Stream," a name that enjoys local popularity as the name of the county, a township and a creek.

In its evolutionary tradition, Lycoming College continues to expand its programs and improve its academic excellence with each decade, seeking to provide a truly distinguished baccalaureate education to every student entering its doors.



THE CAMPUS

Nineteen buildings sit on Lycoming's 35-acre campus. Most buildings have been constructed since 1950. All are easy to reach from anywhere on campus. A 12-acre athletic field and football stadium lie a few blocks north of the main campus.

Modern buildings include the eight residence halls, which contain clean and comfortable double rooms; the student union; and the physical education/recreation center. Up-to-date facilities include the library, the theatre, the planetarium, the computer center, an electronic music studio, a photography laboratory, and an art gallery. The computer center opened in 1969; the art gallery and the physical education center opened in 1980. An arts center was renovated and opened in 1983. The Heim Biology and Chemistry Building opened in 1990.

Residence Halls

Asbury Hall (1962) — Named in honor of Bishop Francis Asbury, the father of The United Methodist Church in America, who made the circuit through the upper Susquehanna District in 1812, the year Lycoming (then the Williamsport Academy) opened its doors. Asbury Hall houses freshman students in a co-educational environment.

Crever Hall (1962) — Honors Lycoming's founder and first financial agent, the Rev. Benjamin H. Crever, who helped persuade the Baltimore Conference to purchase the school from the Williamsport Town Council in 1848.

East Hall (1962) — Houses five chapters of Lycoming's fraternities and sororities. The self-contained units contain student rooms and a chapter room.

Forrest Hall (1968) — Honors Dr. and Mrs. Fletcher Bliss Forrest and Anna Forrest Burfeindt '30, the parents and sister of Katherine Forrest Mathers '28, whose generosity established the memorial.

Rich Hall (1948) — Honors the Rich family of Woolrich, Pennsylvania. It houses health services, dining services office, security, residence life, and buildings and grounds. Rich is an all female hall.

Skeath Hall (1965) — The largest residence hall honors the late J. Milton Skeath, professor of psychology and four-time Dean of the College from 1921 to 1967. It houses freshmen in a co-educational environment.

Wesley Hall (1956) — Honors John Wesley, the founder of Methodism. This building houses a number of Greek organizations, as well as independent students.

Williams Hall (1965) — Honors Mary Ellen Whitehead Williams, mother of Joseph A. Williams, of St. Marys, Pennsylvania, whose bequest established the memorial.

Academic Buildings

Academic Center (1968) — The most architecturally impressive complex on campus, the Center is composed of four buildings: the John G. Snowden Memorial Library, Wendle Hall, the Arena Theatre and Laboratories, and the faculty office building.

John G. Snowden Memorial Library (1968) — The library is named after the late state senator John G. Snowden. An active instruction program acquaints students with academic library strategies and supports their specific research in each discipline studied. Students become familiar with research methods using print materials, web accessed academic information resources, and other information technologies. The collection includes more than 180,000 volumes, approximately 1000 periodical titles, and a strong reference section suitable to an undergraduate education. The Snowden Memorial Library also serves as a partial depository for U.S. government publications and houses the archives of the Central Pennsylvania Conference of the United Methodist Church and the College archives.

Art Gallery (1980) — Located in the northwest corner of the first floor of the John G. Snowden Memorial Library, the gallery contains exhibits year-round, including shows of student work.

Office of Communications Technology/Computer Center (1969) — (www.lycoming.edu/dept/oct) Lycoming College provides at least one computer network access point in each classroom, office, and for each student on campus. Students have access to a variety of on-campus and worldwide resources through the network.

The College maintains five public use computer labs, four labs populated with Windows-based computers, and one lab with a mix of Windows and Macintosh computers.

The Windows labs utilize several popular software packages, such as Office 2000 (Word, Excel, PowerPoint, Access, FrontPage 2000), Internet Explorer, and SPSS. The Graphics Lab utilizes Microsoft Office, PageMaker, Photoshop, Quark XPress, Illustrator, FrontPage 2000, and Macromedia Director and DreamWeaver. Laser printing and Zip drives are available in all labs, with scanning available in the Graphics Lab.

Lycoming College maintains a site on the World Wide Web where our URL is <http://www.lycoming.edu>. Any student who is enrolled at Lycoming receives an e-mail account as well as a network account with disk space for a personal Web site and common files. These are backed up daily. Most academic departments maintain home pages and resources under the Lycoming College home page(s). Many faculty post departmental home pages and communicate with their students by e-mail.

Any student living in a residence hall can become part of the Residential Networking Program, ResNet. They then have direct access to the Lycoming network and the Internet. Students need properly configured computers to give them access to e-mail and the World Wide Web from their rooms.

An IBM RS6000 running Unix provides access to a variety of different software packages to students in the Mathematical and Computer Sciences.

ResNet (1995) - Any student who has a computer is encouraged to bring it to campus. To join the Residential Networking Program, ResNet, a student must have a computer that meets a minimal set of standards and he/she must complete the Residential Networking Access Account Application, contracting for the complete set of Internet Services. The access account fee is \$15.00 per month. Applications are available on the Web at www.lycoming.edu/acad/resapp.htm, in the Residence Life Office, the Telecommunications Office, or in the Office of Communications Technology. For full instructions you can also go to www.lycoming.edu/acad/resnet.htm.

Video Conference Facility (1995) - The College maintains a specially equipped video-conference facility that provides access to courses, lectures and resources that would otherwise be unavailable. Lycoming is part of a consortium of schools that uses this technology to enhance educational opportunities.

Computer Graphics Lab (1993) — This computer lab features state-of-the-art Macintosh and Windows NT graphic stations equipped with animation, photographic imaging, and paint and draw programs for both fine arts and commercial design students, along with desktop publishing and a number of other programs for general use. The programs are updated annually.

Nursing Skills Laboratory (1983) — Located in the lower level of the Academic Center, it is a replica of a modern hospital ward, complete with 10 simulated work stations, a nurses' station, an intensive care unit and all the medical equipment used by nurses.

Wendle Hall (1968) — Named after the George Wendle family, a College benefactor, this building contains 21 classrooms, the psychology laboratories, four computer laboratories with 75 terminals available for use, and spacious Pennington Lounge, an informal meeting place for students and faculty.

Mary L. Welch Theatre and Laboratories (1968) — The 204-seat thrust-stage theatre, formerly known as the Arena Theatre until 2000, theatre is one of the finest in the region. It includes projection facilities, scene and costume shops, a make-up room, and a multiple-use area known as the Down Stage, where one-act experimental plays are performed. The language, business, mathematics, and physics laboratories are situated on the upper floors. The Detwiler Planetarium is located on the ground floor.

Faculty Office Building (1968) — Contains faculty offices, seminar rooms, and a 735-seat lecture hall.

Fine Arts Center (1923, renovated 1983) — Contains studios, sculpture foundry, woodshop, printmaking shop, classrooms, lecture hall, offices.

Academic Resource Center — Located on the top floor of the Fine Arts Center, it is operated by a professional staff and peer tutors during the academic year. The Center offers workshops, tutoring, and counseling.

Photography Laboratory (1984) — Located in the lower level of the Fine Arts Center, it is fully equipped for both black and white and color photography.

Communication Center (1987) — The focal point of the facility is a fully equipped broadcast quality television studio and control room. The building also houses an editing room, a classrooms, faculty offices, the FM radio station and the student newspaper office.

Heim Biology and Chemistry Building (1990) — The \$10 million Heim Building is one of the finest undergraduate science facilities in the East. The three-level structure totals more than 63,000 square feet and contains state-of-the-art biology and chemistry laboratories, lecture halls, seminar rooms, a science reading area and a greenhouse as well as classrooms and faculty offices.

Clarke Building & Chapel (1939) — Lycoming's landmark honors Martha B. Clarke, a benefactor. The building contains Clarke Chapel, St. John Neumann Chapel, the United Campus Ministry Center, a recital hall, music classrooms, practice studios, an electronic music studio and faculty offices.

Administration Buildings

Drum House — Built in 1857 the Admissions House is the oldest building on the campus. It was first occupied by a Presbyterian parson.

The Admissions House was bought by the College in 1931, along with 28 other dwellings, and in 1940 became the President's home. John W. Long occupied it for the remainder of his tenure and D. Frederick Wertz lived in the house from 1955 until 1965 when the College made the property at 325 Grampian Boulevard the President's home. The building was then converted for use by the Fine Arts Department. In 1983, when a new Fine Arts facility was completed, the department was relocated and the house was vacant until 1987 when it was restored by college craftsmen to its original Federalist design under the supervision of Carol Baker '60, who kindly volunteered her services during the year-long reconstruction. The Admissions House was a gift of the W.F. Rich family.

John W. Long Hall (1951) — Named after President Long (1921-1955), it houses the administrative offices, including those of the President, Dean, Treasurer, Dean of Student Affairs, Registrar, Alumni and Parent Programs, College Relations, Institutional Advancement, Publications, and Financial Aid. It includes a reception area.

Recreation Facilities

Physical Education and Recreation Center (1980) — Includes the George R. Lamade Gymnasium, which contains basketball and other courts; a six-lane swimming pool; all-purpose room; sauna and steam room; weight room; offices; classrooms, and the Alumni lounge.



Wertz Student Center (1959) — Named after D. Frederick Wertz, President (1955-1968), it contains the main and private dining rooms, Burchfield Lounge, a recreation area, game rooms, Jack's Corner, bookstore, post office, student activities office, Career Development Center, Counseling Center, and student organization offices.

Handicapped Accessibility

Most facilities at Lycoming College are accessible to those with limited mobility. In addition, the College will make special accommodations whenever necessary to meet the needs of any of its students.

ADMISSION TO LYCOMING

Lycoming College welcomes applications from prospective students regardless of age, sex, race, religion, financial resources, color, national or ethnic background.

Admission Decision Criteria

Admission to Lycoming College is competitive. Applicants are evaluated on the basis of their academic preparation, talents, and interests, as well as the College's capacity to help them achieve their educational objectives and career goals.

Successful candidates for admission have typically completed a college preparatory program in high school which includes four years of English, three years of math, two years of foreign language, two years of natural or physical science, three years of social science, and two years of academic electives.

In addition, successful admission candidates generally place in the top two-fifths of their high school graduating class, and have better than average SAT or ACT scores.

From time to time supplemental materials, as well as a personal interview, may be required prior to the determination of admissibility.

Admission Application Filing Period

Applications for the fall semester will be accepted from June 1st of the preceding year through April 1st of the year in which studies are to begin. Applications for the spring semester are accepted from the preceding May 1st through December 1st.

Applications, when complete, are reviewed and evaluated on a rolling basis. Generally, applicants are notified in writing regarding the outcome of their applications within three weeks following the receipt of all required materials.

Freshman Applicants

Freshman applicants must complete the following steps:

- 1) Submit the completed Lycoming College Admission Application.
- 2) Submit the non-refundable \$35 application fee.
- 3) Provide official transcripts of all high school and post-secondary school studies (whether or not completed).
- 4) Submit official results of the SAT1 or ACT.
- 5) Submit two personal letters of recommendation.

Transfer Applicants

Lycoming College considers applications from students who have attended other post-secondary educational institutions. These applicants must have earned a cumulative grade point average of at least 2.00 (on a 4 point scale) in transferable courses at the post-secondary institution(s) attended.

Credit will be granted only for courses which have a grade of "C-" or higher. Courses with a non-grade such as "P" or "S" will not transfer. Lycoming College will determine which courses are appropriate for transfer and is under no obligation to accept any course. Final determination of transfer credit will be made by the Lycoming College Registrar based on official transcripts only.

Transfer courses will be shown on the Lycoming transcript with the symbol "T."

Transfer applicants must complete each of the following steps:

- 1) Complete and return application with the \$35 application fee.
- 2) Provide official transcripts and course descriptions or catalogs from each post-secondary school attended. Students who have accumulated less than 24 semester hours or 36 credit hours must also submit high school transcripts.

- 3) Submit the transfer student admission report (it will be sent to you upon application).

Applicants may transfer up to 64 semester credits at the Lycoming College 100 and 200 level and up to 32 semester credits at the Lycoming College 300 and 400 level for a total of 96 credits. Students must complete the final 32 credits of the degree program at Lycoming College. At least 16 credits in the major area must be taken at Lycoming College. Challenge examinations may not be used to fulfill this requirement.

Additional information regarding the transfer of college credit appears on page 24.

International Applicants

Prospective students who are neither citizens nor permanent residents of the United States are welcome to apply for admission.

International applicants must complete each of the following steps:

- 1) Submit the completed Lycoming College Admission Application.
- 2) Provide certified true copies of all secondary (and when applicable, post-secondary) transcripts, mark sheets, diplomas, and certificates in the original languages, as well as in English (when the originals are not in English). Translations of non-English materials must be certified as true and correct.
- 3) Submit two letters of recommendation.
- 4) Provide proof of the ability to read, write, and speak English at the college level as evidenced by a TOEFL score of at least 500, or 173 for computer assessment test.
- 5) International students who are currently studying in the United States must be "in-status" with the United States Department of Justice, Immigration and Naturalization Service. They must also be eligible to transfer to Lycoming College.

Please note that the minimum amount required for each academic year of study (September through April) at Lycoming College is U.S. \$24,000. Summer living expenses (May through August) average an additional U.S. \$4,500, and are not included in \$24,000 amount.

Note To All Students:

- 1) If there is additional information that would be helpful to the Admissions Committee in reviewing your application, please indicate it on a separate piece of paper.
- 2) If you are 24 or older, the requirement for the SAT or ACT assessment may be waived.

Readmission to the College

All students who leave the College for one or more semesters must apply for readmission through the Office of the Registrar. Students will be notified by mail when readmission has been granted. They must then pay a deposit of \$100 confirming their intention to re-matriculate in order to receive registration materials. Students seeking residence must submit an additional \$100 Room Reservation Deposit as well as contact the Office of Residence Life to make arrangements to reserve a room. These deposits are non-refundable. Students who do not attend Lycoming College the term for which readmittance is granted will be required to complete another readmission application when they desire to return. Students who return to the College after no more than one academic year has passed may retain the same requirements in effect at the initial date of entrance. After one year, students will be required to complete the requirements currently imposed upon other students of the same academic level.

Confirmation of Intent to Enroll at Lycoming

Admitted applicants are asked to confirm their intent to enroll for the fall semester no later than the preceding May 1st, or by December 1st for the following spring semester by submitting the appropriate deposit. Nonresident, commuting students are required to submit a \$100 Confirmation Deposit. Resident students are required to submit the \$100 Confirmation Deposit, as well as a \$100 Room Reservation Deposit. Admitted international applicants are required to submit all applicable deposits prior to the issuance of the I-20 form.

Deposits are non-refundable after May 1st for the following fall semester, and December 1st for the following spring semester.

Student Orientation

Incoming freshmen and upperclass transfer students are required to attend one of three summer orientation sessions with at least one parent before they enroll in the fall. The purpose of the program is to acquaint the new students and their parents more fully with the College so that they can begin their Lycoming experience under the most favorable circumstances. Students will take placement tests, meet their academic advisor, and preregister for fall classes. Information on orientation is mailed to new students after they confirm their intention to enroll.

Withdrawal of Admission Offers

Lycoming College reserves the right to withdraw offers of admission when:

- 1) information requested as part of the admission application process is not provided by applicants.
- 2) misrepresentation of fact to the College by applicants occurs during the application process.
- 3) the conduct of applicants is not in keeping with the ethical or moral standards as set forth in the *Lycoming College Catalog* or the *Lycoming College Student Handbook*.



FINANCIAL MATTERS

Expenses for the Academic Year 2001-2002

The following expenses are effective for the regular fall and spring semesters. The College reserves the right to adjust fees at any time. The fees for each semester are payable approximately two weeks prior to the start of classes for the semester as indicated on the semester bill.

Fees	Per Semester	Per Year
Tuition	\$9,552.00	\$19,104.00
Room Rent	\$1,390.00	\$2,780.00
Board	\$1,298.00	\$2,596.00
Total	\$12,240.00	\$24,480.00

One-Time Student Fees

Application Fee	\$35
Confirmation Deposit	\$100
Room Reservation Deposit	\$100

Part-Time Students Fees

Application Fee	\$35
Each Unit Course	\$2,388

Additional Charges

Non-refundable Enrollment Deposit for Returning Students	\$100
Activity Fee	\$80
Applied Music Fee (half-hour per week per semester)	\$210
Cap and Gown Rental	prevailing cost
Laboratory Fee per Unit Course ..	\$10 to \$100
Parking Permit (for the academic year). ...	\$60
Practice Teaching Fee (payable in junior year)	\$400
School Nurse Practicum Fee	\$400
R.O.T.C. Uniform Deposit (payable at Bucknell University)	\$75
Transcript Fee	\$3*
Placement Retest Fee	\$25
Single Room Charge.....additional charge of	
	\$556 per semester.

The tuition covers the regular course load of twelve to sixteen credits each semester excluding band, choir, theater practica and all scholars seminars. Resident students must board at the College unless, for extraordinary reasons,

Admissions Office Location and Hours

Prospective students and their families are encouraged to visit the campus for a student-conducted tour and an interview with an admissions counselor, who will provide additional information about the College and answer questions.

The Office of Admissions is located on Washington Boulevard and College Place. For an appointment, telephone 1-800-345-3920, ext. 4026 or (570)321-4026, or write the Office of Admissions, Lycoming College, Williamsport, PA 17701.

Office hours are:

Weekdays

September through April: 8:00 a.m. to 4:30 p.m.
May through August: 8:00 a.m. to 4:00 p.m.

Saturdays

September through April: 9:00 a.m. to 12:00 noon
May through August: appointments by request.

authorization is extended for other eating arrangements. If a double room is used as a single room, there is an additional charge of \$556 per semester. The estimated cost for books and supplies is up to \$800 per year, depending on the course of study. Special session (May Term and Summer Session) charges for tuition, room, and board are established during the fall semester.

**\$3 for first copy; \$1 for each additional copy requested at the same time. No charge for currently enrolled full-time students. No transcripts will be issued for a student or alumnus whose financial obligation to the college has not been satisfied.*

Entry Fees and Deposits

Application Fee — All students applying for admission must submit a \$35 application fee. This charge defrays the cost of processing the application and is nonrefundable.

Confirmation Deposit - All full-time students who have been notified of their admission to Lycoming College are required to make a \$100 Confirmation Deposit to confirm their intention to matriculate. The Deposit is held until Graduation or until voluntary permanent termination of enrollment, at which time any remaining balance is refunded after all debts to the College have been satisfied.

Resident students must remit an additional \$100 Room Reservation Deposit. The room deposit is applied against the comprehensive fees billed for the first semester of attendance.

Both the Confirmation and Room Reservation Deposits are refundable prior to the start of the first semester of attendance if the official withdrawal date is not later than May 1.

Enrollment Deposit — A non-refundable enrollment deposit of \$100 is required of all current full and part-time degree-seeking students each spring in order to pre-register for the subsequent fall semester courses and/or to participate in the annual room selection process. This deposit is applied against the fall semester bill.

Partial Payments

For the convenience of those who find it impossible to follow the regular schedule of payments, arrangements may be made with the College Bursar for the monthly payment of College fees through various educational plans. Additional information may be obtained from the Treasurer's Office or Admissions Office.

Lycoming College Withdrawal Refund Policy

Students wishing to withdraw from the College during the semester should meet with the Associate Dean of the College or the Assistant Dean for Freshmen to ensure that student financial and academic records are properly closed. The effective date of calculating refunds shall be: the date, as determined by the institution, the student began the withdrawal process or provided official notification to the institution of his or her intent to withdraw; the midpoint of the payment period or period of enrollment if the student dropped out without notifying the institution; or the date, as determined by the institution, that the student withdrew due to illness or accident.

Students withdrawing will receive a prorated refund for tuition, fees, room and board, less an administrative fee of \$100 and any unpaid charges, according to the following schedule:

	Refund	Charge
During Week 1	90%	10%
During Week 2	85%	15%
During Week 3	80%	20%
During Week 4	70%	30%
During Week 5	65%	35%
During Week 6	60%	40%
During Week 7	50%	50%
During Week 8	45%	55%
During Week 9	40%	60%
After 9th Week	0%	100%

Comparative schedules apply to the May and Summer terms.

The U. S. Department of Education requires that, for any student receiving federal

financial aid, the federal programs be refunded IN FULL in the following order: Unsubsidized Federal Stafford Loan, Subsidized Federal Stafford Loan, Federal Perkins Loans, Federal PLUS Loans, Federal Pell Grants, FSEOGs, other SFA Programs, and other federal, state, private, or institutional sources of aid prior to any refund being issued to the student. See Federal Funds Withdrawal Policy for further explanation on return of Federal Funds. State Grant programs have varying regulations concerning refunds, but most will require at least a partial refund of the State Grant. If the student has received a Lycoming Grant, a pro-rated portion of the student's refund also will be repaid to the Lycoming Grant program. This will reduce, or in many cases eliminate, the amount of the refund the student otherwise would receive. Detailed examples are available from the Financial Aid Office.

Full-time students who, after reducing their course loads, continue to be enrolled for 12 to 16 semester hours are not eligible for a refund of tuition for an individual course. Students who register for extra hours in excess of 16 hours per semester and who later reduce their loads will be refunded the fee charged for overloads according to the above schedules. Students who enroll full-time and subsequently assume part-time status by reducing their loads below 12 hours, and part-time students who drop individual courses, will be refunded according to the above schedules for the semester hours dropped. The assumption of part-time status normally involves a substantial reduction of financial aid since most financial aid programs do not extend eligibility to part-time students.

The calculated refund will be reduced by unpaid charges. Any balance remaining will be billed to the student. Unpaid student account balances will be charged interest at the rate of 1% per month on the month end balance until account is paid in full. Should legal collection become necessary, all costs of collection will be added to the balance due.

FEDERAL FUNDS WITHDRAWAL POLICY

Definitions

Earned Title IV Funds: Title IV funds used to cover educational costs according to the length of time the student was enrolled before withdrawing. The amount of funds earned is directly proportional to the time enrolled, through 60% of the term. After 60%, the student is considered to have earned all aid. The earned Title IV funds percentage is calculated by dividing the number of days completed up to the withdrawal date by the total days in the billing period.

Unearned Title IV Funds: The amount of grant and loan assistance awarded under Title IV that has not been earned by the student. The law states the earned Title IV funds are to be used to cover the length of time the student was enrolled before withdrawing. Unearned Title IV funds must be returned to the programs. The unearned Title IV funds percentage is determined by subtracting the earned Title IV funds percentage from 100%. To calculate the amount of unearned Title IV funds, multiply total disbursed federal financial aid (3) by the unearned Title IV funds refund percentage.

Withdraw date: The date the student began the withdrawal process; the date the student otherwise provided the school with official notification of the intent to withdraw; or for the student who does not begin the school's withdrawal process or notify the school of the intent to withdraw, the mid-point of the payment period or period of enrollment for which Title IV assistance was disbursed (unless the institution can document a later date).

The responsibility to repay unearned Title IV funds is shared by the college and the student. The college's share is the lesser of: the total amount of unearned Title IV funds; or Institutional charges incurred for the billing period multiplied by the percentage of aid that was unearned:

1. Stafford, PLUS and Perkins loans, Pell Grant and SEOG
2. A student is not eligible for a Title IV refund if he or she receives an "incomplete" status

for coursework that can be, and is expected to be completed within a reasonable timeframe after the end of the billing period. Please refer to the college catalog for "incomplete" coursework deadlines.

3. Total disbursed federal financial aid includes aid that was disbursed and aid that could have been disbursed as of the student's withdrawal date.

The student's share is the difference between the unearned Title IV funds and the college's share. The college's share is allocated among the Title IV programs in the following order of return:

Federal Unsubsidized Stafford Loan

Federal Subsidized Stafford Loan

Federal PERKINS Loan

Federal PLUS Loan

Federal Pell Grant

Federal SEOG

Other Title IV assistance for which a return of funds is required

Scholarships may be awarded on the basis of merit and/or need, while grants are provided solely on the basis of financial need. Long-term educational loans with favorable interest rates and repayment terms are available, as are part-time employment opportunities.

It is important to submit financial aid applications after January 1st, as appropriate income information becomes available, but by April 15. Although applications may be filed later, applicants can only receive consideration for remaining available funds.

To be considered for financial aid, students and families must complete the following steps for each year the student seeks assistance:

1. Fully complete and submit the Lycoming Financial Aid Application (LFAA). Return the completed application to the Financial Aid Office.
2. The College may request signed and dated copies of student and parent(s) Federal income tax returns (1040, 1040A, 1040ez, 1040PC, TeleFile), including W-2 forms, be sent to the Financial Aid Office. The tax returns required are for the year preceding the academic year in which the student seeks assistance.
3. Fully complete and submit the Free Application For Federal Student Aid (FAFSA). Returning students should submit the Renewal FAFSA.
4. PA residents can apply for state grant assistance using the FAFSA as well. Non-PA residents should contact the State Grant Agency in their home state to see if additional forms must be filed.

Basic eligibility requirements for all federal programs are listed on the FAFSA application. Students are responsible for understanding the basic eligibility requirements.

Enrollment Status for Financial Aid Eligibility

Financial aid eligibility is substantially reduced for students who are charged less than

FINANCIAL AID

Lycoming College is committed to helping students and families meet college costs. While some assistance is available to students regardless of need (merit scholarships), the primary purpose of the College's financial aid program is to help qualified students of limited financial resources attend Lycoming College.

full-time tuition. Credit is earned for some courses which are offered at no charge, including choir, band, theatre practica and all scholar-seminars. Therefore, these credits would not be counted in the full-time tuition calculation. For financial aid purposes, a full-time student is enrolled in 12-16 billable semester hours.

Financial Aid Satisfactory Progress Policy

To remain eligible for federal, state, and institutional financial aid, all students must maintain financial aid satisfactory progress as defined below. The financial aid satisfactory progress policy is separate and distinct from the College's academic progress policy.

Students retain eligibility for financial aid for ten (10) semesters of full-time study. However, it is the College's practice to limit institutional grants/scholarships to eight (8) semesters of full-time study. Should students attend beyond eight semesters of full-time study, they may still be eligible for federal and/or state aid for the 9th or 10th semester.

In some instances a student may appeal academic suspension and be permitted to continue enrollment even though the student has fallen behind in credit hours or cumulative GPA (see Academic Levels and Academic Standing sections on page 27). A student who is granted an academic appeal may continue to receive financial assistance only if the student meets the minimum qualitative (GPA) and quantitative (credits completed) requirements listed below.

End of Sem.	Min. Cum. GPA	Min. Cr. Comp.
1	1.50	10
2	1.60	20
3	1.70	34
4	2.00	48
5	2.00	61
6	2.00	74
7	2.00	88
8	2.00	102
9	2.00	115
10	2.00	128

Students who fail to successfully complete the minimum number of credits and/or who fail to meet the minimum cumulative GPA requirement will be placed on financial aid probation. This allows one additional semester of course work to bring the academic record up to minimum standards. Failure to meet the stated minimum after the probation period will result in a suspension of all (federal, state, and institutional) financial aid until the standards are met.

Financial aid satisfactory progress is measured annually and cumulatively by the Office of Financial Aid. Official notification of probation or suspension is made by the Office of Financial Aid. Students wishing to appeal his or her suspension of aid, and who have legitimate reason for doing so (e.g. illness), must put their request in writing to the Director of Financial Aid at least two weeks prior to the start of the semester for which the exception is sought. Students placed on Financial Aid Probation for a period of two (2) consecutive semesters, and who have therefore been granted an appeal after the first probation semester, are prohibited from future appeals. If the student fails to attain the minimum standards after the second semester of probation, eligibility for financial assistance will be cancelled automatically.

Acceptance of an appeal is only valid for determining eligibility for financial assistance and has absolutely no bearing on any determination made by the Registrar and/or the Committee on Academic Standards.

College Scholarships & Grants

NOTE: Lycoming Scholarships and Grants are awarded to eligible students who are full-time and degree-seeking. Students already possessing a bachelor's degree are ineligible for scholarships, grants and institutional loans.

Lycoming Grants may be awarded to students to help meet their documented financial need. Renewal requires continued financial need as determined by Federal Methodology and/or the financial aid director. Students should

expect the Grant award to remain constant for each semester they are enrolled.

Ministerial Grants are awarded to dependent children of United Methodist ministers and ordained ministers of other denominations. This grant amounts to 33% of tuition for children of United Methodist ministers in the Central Pennsylvania Conference and 25% of tuition for all others. Students meeting the criteria for this grant and any other Lycoming Scholarship(s) will be awarded the scholarship(s)/grant that provides the highest dollar amount; both will not be awarded.

Pre-Ministerial Student Grants of up to 25% tuition are awarded to students preparing for the Christian ministry. Students must complete a pre-ministerial grant application available through the financial aid office. Students meeting the criteria for this grant and any other Lycoming Scholarship(s) will be awarded the scholarship(s)/grant that provides the highest dollar amount; both will not be awarded.

Federal Grants

Pell Grants are made available by the federal government. Eligibility is based upon a federal formula.

Supplemental Educational Opportunity Grants may be awarded to students with exceptional financial need. Priority must be given to Pell Grant recipients. Funds are provided by the federal government. Funds are limited.

State Grants

Pennsylvania Higher Education Assistance Agency (PHEAA) Grants are available for PA residents meeting domicile and financial requirements of the program. Eligibility is determined by PHEAA. These grants are available for a maximum of 8 semesters. Non-PA residents should contact the State Grant Agency in their home state for availability of funds to students attending out-of-state colleges.

Loan Programs

Federal Subsidized Stafford/Keystone Loan allows eligible Freshmen to borrow a maximum of \$2,625 annually. Eligible Sophomores may borrow up to a maximum of \$3,500 annually. Eligible juniors and seniors may borrow up to a maximum of \$5,500 annually. The federal government pays the interest while the student is enrolled on at least a half-time basis. The student begins to repay the loan (interest and principal) 6 months after leaving school. The interest rate for new borrowers is variable based on the 91-DAY T-BILL plus 3.1%, capped at 8.25%. The rate is adjusted every July 1. Loan amounts are pro-rated for less than full-time students. Eligibility is based on financial need.

Federal Unsubsidized Stafford/Keystone

Loan provides an opportunity for students to borrow under the Stafford Program who do not qualify for the maximum amount of subsidized Stafford loan. Maximum grade level amount minus subsidized eligibility equals unsubsidized eligibility. Interest must be paid by the borrower on a quarterly basis while enrolled (check with your lender to see if interest payments may be deferred). Other aspects of the loan are similar to those under the Subsidized program. Independent students may be eligible for higher loan limits; contact the Financial Aid Office for more information.

Federal Perkins Loan (formerly the National Direct Student Loan) may be offered to students with exceptional need. Borrowers must repay the loan, plus 5% per annum simple interest on the unpaid balance, over a period beginning nine months after the date on which the borrower ceases to be enrolled at least half-time. Funds are limited.

PLUS Loan is a loan parents may take out on behalf of their dependent student. The amount a parent may borrow for one year is equal to the cost of education for one year minus any financial aid the student is eligible for in that year. The interest rate is variable but is capped at

9%. The interest rate is determined every July 1 and is equal to the bond equivalent rate of 52-week T-Bill plus 3.1%. An application is available at your bank or other lending institution.

Employment Opportunities

Federal College Work-Study Program

Awards provide work opportunities on campus for qualified students. Students receive paychecks for work performed in the previous pay period. Based on documented need and awarded by the Financial Aid Office. Funding is limited. The student assumes full responsibility in locating a job. Returning students who wish to work the following year must have their name submitted to the Financial Aid Office by their supervisor before the end of the Spring semester.

Students also have the opportunity to seek work-study employment off-campus in the Community Service program. Interested students can get additional information in the Financial Aid Office.

Lycoming Campus Employment Program is similar to Federal Work-Study except that students are paid with institutional funds only and is not based on financial need. A limited number of jobs are available. Funding is limited.

Other Job Opportunities are frequently available with local business firms or persons. Contact the Career Development Office of the College for information on these opportunities.

Other Aid Sources

Veterans and Dependents Benefits are available for qualified veterans and children of deceased or disabled veterans. Contact the Veteran's Officer in the Registrar's Office.

Reserved Officers Training Corps (ROTC) Stipends and Scholarships are available for qualified students. Contact the Financial Aid Office for more information.

Tuition Exchange Grants may be available. Lycoming College is a member of both the Tuition Exchange Program and the CICU

Tuition Exchange Program. These programs are for dependent students of employees at participating institutions of higher education. Students should contact the Tuition Exchange officer at their sponsor institution for information regarding sponsorship. Students are expected to apply for all federal and state grants. If the student receives a federal or state grant, those amounts may be applied toward room and board charges if the student resides in the dorms. If the student commutes, the grant amount is equal to tuition less federal and state grants.

United Methodist Scholarships may be available to full-time degree-seeking applicants who have a cumulative GPA of 3.00 or better, are active in Christian activities, and who are active, full members of a United Methodist church. Demonstrated financial need is also required. Normally, seven \$500 scholarships are awarded each year. Annual application is required. Recipients are selected by the Director of Financial Aid and will be awarded to the neediest students. The funds are provided by the United Methodist Church. Applications are available in the Financial Aid Office. Renewal requires a cumulative GPA of at least 3.00.

United Methodist Student Loans are available on a very limited basis to students who are members of the United Methodist Church. The maximum amount which may be borrowed for an academic year is \$2,500 subject to the availability of the funds. Contact The Board of Higher Education and Ministry, P.O. Box 871, Nashville, TN 37202 for more information.

Non-college Aid Opportunities are often available through family employers or labor unions, business firms, fraternal and religious organizations, and secondary schools. Your parents should contact their employer or organizations of which they are members for information on financial aid resources.



STUDENT AFFAIRS

The Division of Student Affairs coordinates a variety of programs, services, and activities designed to enhance students' personal, social, and educational growth and development. This is accomplished through a composite of programs, offices, and staff including:

- Career Development Center
- Campus Ministry
- Commuter Student Affairs
- Counseling and Wellness Services
- Greek Life
- Health Services
- International Student Advising
- Intramural Sports, Recreation, and Leisure Time Activity
- Judicial Affairs
- Residence Life
- Safety and Security
- Student Activities and Leadership Development

The Student Affairs staff view students as partners in the educational process and, therefore, expect that students will share responsibility for managing our educational community.

Career Development Center

The Career Development Center provides services which are designed to help students

identify their abilities and interests, set realistic goals, and plan academic programs to meet these goals. Counseling for Lycoming students begins in the freshman year.

Individual and group counseling focus on teaching students how they can learn about different career fields and present themselves to potential employers in a positive and effective manner. Helping students make appropriate and meaningful connections between college and career is a goal of the Career Development Center.

Counseling & Wellness Services

Counseling Services assist students to ensure that their college experience is prosperous and rewarding. Professional, confidential services are provided at no direct charge to Lycoming students. Counseling Services are designed to facilitate one's self-understanding as well as to provide support for students' adjustment and transition to college life. Counseling Services also provide advocacy to individual students and student organizations, and they conduct outreach programs for the entire college community.

Health Services

Lycoming College Health Services focuses on the holistic care of the individual, health maintenance, and wellness through health education and prevention of illness. Educational materials and instructional programs are available through the Student Health Services.

Routine medical care is provided without charge on a daily basis Monday-Friday 8:00 a.m.-4:30 p.m. during the fall and spring semesters. The office is staffed by a full-time registered nurse with a physician available on a daily basis.

Health Services' policies reflect the recommendations of the American College Health Association (ACHA), the Pennsylvania Department of Health, and the Centers for Disease Control (CDC).

Community Service

Community Service is an learning opportunity for students accomplished in conjunction with various agencies in the Williamsport area or college departments. This activity allows students to expand their knowledge about diverse individuals and communities. The outcome of such service promotes students' personal and social development as well as giving them an enhanced perspective of civic responsibility and social justice.

The Community Service Center, located in Asbury Hall, coordinates many service opportunities available to students, faculty, and staff in the greater Williamsport area. A number of the community service projects include Big Brothers/Big Sisters, Habitat for Humanity, the Literacy Project, a school tutoring program, Kiwanis Kids Kamp, Adopt-A-Highway, Bloodmobile, Shephard of the Streets, and the CROP Walk for World Hunger.

Residence Life

As a residential college, Lycoming offers students the opportunity to integrate academic and residential experiences. The Residence Life Office is committed to providing a living/learning environment to help each resident grow as a person and as a student. Lycoming College requires all students to live in college housing and participate in the college board plan each of their four years. Married students, students residing with their parents within a 40 mile radius, students living with their dependents, and students 23 years or older may request to be exempted from this policy. Such requests should be submitted in writing to the Dean of Student Affairs at least three weeks prior to the beginning of the semester for which students are requesting permission to live off campus.

Residence halls put students at the heart of College activity—offering greater opportunities for participation. Through programs, leadership opportunities, and peer interactions, residents gain a sense of belonging to the

campus community, acquire new knowledge and skills, have easy access to College services, make informed choices, and assume responsibility for themselves and their community.

The residence halls are staffed with upperclass students who serve as Resident Advisors (RAs) selected on the basis of leadership skills. RAs provide information, refer students to campus and local resources, help enforce College and community standards, use helping skills for students in need, and facilitate educational and social programs. Most importantly, RAs assist residents in the development and maintenance of strong, positive residence hall communities. The Residence Communities Association also encourages student participation and involvement in such areas as policy formulation, facility improvement, and general resident concerns. With the guidance and support of Residence Life staff, each resident is expected to become involved in promoting a positive learning environment in his or her community.

Several different living options are available for students in our eight residence halls. Asbury and Skeath Halls house all freshmen students in a co-educational environment encouraging students to develop class identity and unity. The six upperclass halls offer opportunities for co-educational housing, an all female hall, fraternity and sorority chapter housing, intensive study areas, a substance free area, and smoking environments. College Apartments are available to sophomores, juniors and seniors who meet specific grade requirements and who are in good disciplinary standing with the College. Additional information is sent to students following their acceptance by the College.

Athletics

Athletics is an important part of the Lycoming experience. As a member of the NCAA, Lycoming sponsors nineteen intercollegiate sports for both men and women student-athletes.

Men can choose from football, soccer, cross country, wrestling, golf, basketball, lacrosse, swimming, tennis, and track and field. Women can compete in soccer, cross country, lacrosse, volleyball, basketball, swimming, softball, tennis, and track and field.

Lycoming is a member of the Middle Atlantic Conference, which is a Division III athletic conference. As a Division III school, Lycoming does not offer athletic scholarships.

In addition, the College offers a very active intramural and recreation program that is open to all students. This program includes, among others, basketball, softball, water polo, beach volleyball, flag football, and soccer.

Student Programs

The Office of Student Programs offers assistance and resources for all campus activities and student organizations. Through the efforts of the student administered Campus Activities Board (CAB), extra-curricular programming is offered to the entire college community. CAB programming is designed to enhance the overall educational experience of students through the exposure to social, cultural, and recreational programs. Members of the staff in Student Activities also direct leadership training programs for the student government, the Interfraternity and Panhellenic Councils, the International Student Organization, the Arrow Yearbook, and all registered student organizations.

Religious Life

The United Campus Ministry, staffed by a Protestant minister and a Roman Catholic lay minister, provides a wide range of activities in support of the spiritual development and religious life of students. Ecumenical and inclusive in nature, Campus Ministry at Lycoming provides worship services, service projects, social occasions, retreats, study opportunities, and personal counseling. The campus ministers are an integral part of campus life and are available to students who may need support, counsel, or direction.

Safety and Security

The Department of Safety & Security strives to maintain an environment that is free of unnecessary hazards and disruptions. This responsibility includes the enforcement of Lycoming College rules, regulations, and policies. Security personnel are scheduled on an around-the-clock basis. An emergency telephone line is always monitored. Twenty-four hour a day telephone extensions are used to handle general security concerns.

The department solicits the cooperation of the entire college community in reporting unsafe conditions and suspicious activity on the Lycoming College campus.

Other services provided by the department are: First aid and ambulatory medical transportation, emergency maintenance referral, an escort service, guest and parking registration, and the dissemination of telephone numbers and general information to the public when the College switchboard is closed.

Standards of Conduct

Lycoming College is committed to the creation and maintenance of a living-learning environment which fosters the intellectual, personal, social and ethical development of its students. Respect for the rights of others and self-discipline are essential to the fulfillment of these goals. Students are expected to adhere to the policies contained in the Student Handbook and other College publications. These policies, rules and regulations are part of the contractual agreement students enter into when they register at Lycoming College.

Students who demonstrate an unwillingness to abide by these policies will be subject to disciplinary action which may include suspension or expulsion from the College. Students are encouraged to review the Student Handbook and Housing License in order to familiarize themselves with the policies governing student conduct.



ACADEMIC POLICIES AND REGULATIONS

Students are expected to familiarize themselves with the academic policies contained in this Catalog. Failure to do so does not excuse students from the requirements and regulations described herein.

THE UNIT COURSE SYSTEM

Instruction at Lycoming College is organized, with few exceptions, on a departmental basis. Most courses are unit courses, meaning that each course taken is considered to be equivalent to four semester hours of credit. Exceptions occur in applied music and theatre practicum courses, which are offered for either one-half or one semester hour of credit, and in departments that have elected to offer certain courses for the equivalent of one, two or three semester hours of credit. Furthermore,

independent studies and internships carrying two semester hours of credit may be designed.

The normal student course load is four unit courses (16 semester hours) during the fall and spring semesters. Students who elect to attend the special sessions may enroll in one unit course (four semester hours) during the May term and one or two unit courses (four - eight semester hours) in each of the summer terms. A student is considered full time when enrolled for a minimum of three unit courses, or the equivalent, during the fall or spring semesters, one unit course, or the equivalent, for the May term, and two unit courses for each of the summer terms.

Students may enroll in five unit courses (20 semester hours) during the fall and spring semesters if they are Lycoming scholars or were admitted to the Dean's List at the end of the previous semester. Exceptions may be granted by the Dean of the College. Overloads are not permitted during the May and summer terms.

ALTERNATIVE CREDIT SOURCES

Transfer Credit

Matriculated students who wish to study at other campuses must obtain prior written approval to do so from their advisor, the chair of the department in which the credit will be awarded, and the Lycoming College Registrar. Course work counting toward a major or minor must also be approved in advance by the chairperson of the department in which the major or minor is offered. Once a course is approved, the credit and grades for the course will be transferred to Lycoming and calculated in the student's grade point average as if the courses were taken here. This means that "D" and "F" grades will be transferred as well as all other grades. Unapproved courses will not transfer. Final determination of transfer credit will be made by the Registrar based on official transcripts only.

Students are expected to complete their last eight unit courses (32 semester hours), and 16 semester hours in their major at Lycoming. Requests for waivers of this regulation must be sent to the Committee on Academic Standards.

Credit By Examination

Students may earn credit or advanced placement through the standardized examinations listed below. A maximum of 50 percent of the course requirements for the Baccalaureate degree may be earned through these examinations. The appropriate academic department will determine which tests they will accept and the course equivalencies. A list of approved examinations is available in the Office of the Registrar. Although these examinations may be taken after matriculation, new students who are competent in a given area are encouraged to take the examination of their choice before entering Lycoming so that the college will have the test scores available for registration advising for the first semester of enrollment. Students applying to the college for the first time should inform the Admis-

sions Office that they have completed these tests and provide the official scores as part of their application packet. Continuing students must send official test scores to the Office of the Registrar and inform their academic advisors when examinations have been taken.

The College Entrance Examination Board Advanced Placement (CEEB AP)

- Depending upon the exam, a score of three or four is required for credit.

The International Baccalaureate - Students who have completed the full diploma and have scores of five or above on the higher level examinations will be granted 32 credit hours; specific courses will be based on the examinations taken. Students who complete the full diploma but earn less than a score of five on all of the higher level examinations will be granted eight credits for each higher level examination completed with a grade of five or higher and four credits for a satisfactory or higher completion of the Theory of Knowledge requirement. Students who have completed the certificate will be granted credit based on the examinations taken. Subsidiary examinations will not be considered.

The American College Testing Proficiency Examination Program (ACT PEP)

- A score equivalent to a grade of "B" or above is required.

College Level Examination Program (CLEP)

- A score equivalent to a grade of "B" or above is required.

Defense Activity for Non-Traditional Education Support (DANTES)

- A score equivalent to a grade of "B" or above is required.

STUDENT RECORDS

The policy regarding student educational records is designed to protect the privacy of students against unwarranted intrusions and is consistent with Section 43B of the General Education Provision Act (commonly known as the Family Educational Rights and Privacy Act

of 1974, as amended). The details of the College policy on student records and the procedures for gaining access to student records are contained in the current issue of the *Student Handbook*, which is available in the library and the Office of the Dean of Student Affairs.

REGISTRATION

During the registration period, students select their courses for the next semester and register their course selections in the Office of the Registrar. Course selection is made in consultation with the student's faculty advisor in order to insure that the course schedule is consistent with College requirements and student goals. After the registration period, any change in the student's course schedule must be approved by both the faculty advisor and Office of the Registrar. Students may not receive credit for courses in which they are not formally registered.

During the first five days of classes, students may drop any course without any record of such enrollment appearing on their permanent record, and they may add any course that is not closed. The permanent record will reflect the student's registration as of the conclusion of the drop/add period. Students wishing to withdraw from a course between the fifth day and the 9th week of classes must secure a withdrawal form from the Office of the Registrar. Withdrawal grades are not computed in the grade point average. Students may not withdraw from courses after the 9th week of a semester and the comparable period during the May and summer terms. Students who stop attending a course (or courses) but do not withdraw will receive a grade(s) of "F."

In zero semester hour and two semester hour (1/2 unit) courses meeting only during the last half of any semester, students may drop/add for a period of five days, effective with the mid-term date shown on the academic calendar. Withdrawal from zero-credit and half-semester courses with a withdrawal grade may occur

within 4 1/2 weeks of the beginning of the course. It is understood that the period of time at the beginning of the semester will be identical, for example, a period of five days as indicated above.

Cross Registration

A special opportunity exists in the Williamsport area for students to take courses at the Pennsylvania College of Technology. Students may enroll for less than a full-time course load at Penn College while remaining enrolled in courses at Lycoming.

Students must be enrolled full-time in a degree program and have earned no more than 93 semester hours. Cross registration is available for the Fall and Spring Semesters, and Summer I and II. It is not available for May Term.

NON-DEGREE STUDENTS

Students who do not wish to pursue a degree at Lycoming College may, if space permits, register for credit or audit courses on either a part-time or full-time basis. Students who register for less than 12 semester hours are considered to be enrolled part-time; students who register for 12 or more semester hours are considered to be enrolled full-time.

Anyone wishing to register as a non-degree student must fill out an application form in the Admissions Office, pay a one-time application fee and pay the tuition rate in effect at the time of each enrollment. After a non-degree student has attempted four unit courses (16 semester hours), the student must either matriculate or obtain permission from the Dean of the College to continue study on a non-degree basis.

All non-degree students are subject to the general laws and regulations of the College as stated in the *College Catalog* and the *Student Handbook*. The College reserves the right to deny permission to register individuals who do not meet the standards of the College.

Students who wish to change from a non-degree to a degree status must apply for admission as a degree candidate and satisfy all conditions for admission and registration in effect at that time.

AUDITORS

Any person may audit courses at Lycoming at one-fourth tuition per course. Members of the Lycoming College Scholar Program may audit a fifth unit course per semester at no additional charge. Laboratory and other special fees must be paid in full. Examinations, papers, and other evaluation devices are not required of auditors, but individual arrangements may be made to complete such exercises with consent of the instructor. The option to audit a course must be declared by the end of the drop/add period. Forms are available in the Registrar's Office.

ATTENDANCE

The academic program at Lycoming is based upon the assumption that there is value in class attendance for all students. Individual instructors have the prerogative of establishing reasonable absence regulations in any course. The student is responsible for learning and observing these regulations.

WITHDRAWAL FROM THE COLLEGE

A student who wishes to withdraw from the College during the semester should contact the Office of the Associate Dean of the College or the Assistant Dean for Freshmen. College personnel will explain the procedure to ensure that the student's financial and academic records are properly closed.

A student who decides to discontinue study at the College as of the conclusion of the current semester must provide the Registrar with written notification of such plans in order to receive a refund of the contingency deposit. See page 14 for details.

GRADING SYSTEM

The evaluation of student performance in courses is indicated by the use of traditional letter symbols. These symbols and their definitions are as follows:

A EXCELLENT - Signifies superior achievement through mastery of content or skills and demonstration of creative and independent thinking.

B GOOD - Signifies better-than-average achievement wherein the student reveals insight and understanding.

C SATISFACTORY - Signifies satisfactory achievement wherein the student's work has been of average quality and quantity. The student has demonstrated basic competence in the subject area and may enroll in additional course work.

D PASSING - Signifies unsatisfactory achievement wherein the student met only the minimum requirements for passing the course and should not continue in the subject area without departmental advice.

F FAILING — Signifies that the student has not met the minimum requirements for passing the course.

I INCOMPLETE WORK — Assigned in accordance with the restrictions of established academic policy.

R A REPEATED COURSE — Students shall have the option of repeating courses for which they already have received a passing grade in addition to those which they have failed. Credit is received only once for the course. The most recent course grade will count toward the GPA.

P PASSING WORK, NO GRADE ASSIGNED — Converted from traditional grade of A through D-.

X AUDIT — Work as an auditor for which no credit is earned.

W WITHDRAWAL — Signifies withdrawal from the course from the sixth day through the ninth week of the semester.

Pluses and minuses may be awarded (except for A+, F+, or F-) at the discretion of the instructor. The cumulative grade point average (GPA) is calculated by multiplying quality points by credits and dividing the total quality points by the total credits. A quality point is the unit of measurement of the quality of work done by the student. The cumulative GPA is not determined by averaging semester GPA's.

Grade	Quality Points Earned for Each Semester Hour
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	0.67
F	0.00

The grade point average for the major is calculated in the same way as the cumulative grade point average. A minimum of 2.00 is required for the cumulative grade point average in the major to meet the requirements for graduation.

Pass/Fail

Use of the pass/fail grading option is limited as follows (this does not apply to ENGL 105):

- Students may enroll on a P/F basis in no more than one unit course per semester and in no more than four unit courses during their undergraduate careers.
- P/F courses completed after declaration of a major may not be used to satisfy a requirement of that major, including courses required by the major department which are offered by other departments. (Instructor-designated courses are excepted from this limitation.)

- Courses for which a grade of P is recorded may not be used toward fulfillment of any distribution or "W" course requirement.
- Students may not enroll in ENGL 106 on a P/F basis.
- A course selected on a P/F basis from which a student subsequently withdraws will not count toward the four-course limit.
- Instructor-designated courses may be offered during the May term with the approval of the Dean of the College. Such courses are not counted toward the four-course limit.
- P grades are not computed in the grade point average.
- Students electing the P/F option may designate a minimum acceptance letter grade from A to B-. If the student earns the designated grade or better, the grade will be recorded in the permanent record and computed in the grade point average. If a student selects P/F (with no designated minimum acceptance grade) and earns a grade of A to D-, a P will be recorded in the permanent record but not computed in the grade point average. In all cases, if a student earns a grade of F, this grade will be recorded in the permanent record and computed in the student's grade point average.
- Students must declare the P/F option before the drop/add deadline.
- Instructors are not notified which of their students are enrolled on an P/F basis.
- Students electing the P/F option are expected to perform the same work as those enrolled on a regular basis.

Incomplete Grades

Incomplete grades may be given if, for absolutely unavoidable reasons (usually medical in nature), the student has not been able to complete the work required in the course. An incomplete grade must be removed within six weeks of the next regular semester, otherwise the incomplete is converted to an "F."

Repetition of Course

Students shall have the option of repeating courses for which they already have received a passing grade in addition to those which they have failed. Recording of grades for all repeated courses shall be governed by the following conditions:

- A course may be repeated only one time. Both attempts will be recorded on the student's transcript.
- Credit for the course will be given only once.
- The most recent grade will count toward the GPA with this exception: A "W" grade cannot replace another grade.

Final Course Grade Appeal Process

Assigning final course grades is a responsibility that falls within the professional judgment and expertise of each faculty member. Grades assess as accurately as possible a student's performance according to clear criteria provided in the course such as academic performance, class attendance, and punctuality in submitting assignments. Student appeals of the final course grade must follow the three-step procedure outlined below.

- (1) Within two weeks of the beginning of the semester following the conclusion of the course, the student should request an informal conference with the instructor to discuss the grade and attempt to resolve the concern.
- (2) If the outcome of the informal conference is not satisfactory to the student, or the instructor is not available, the student may submit a written request to meet with the department chairperson (or another faculty member in the department in instances involving the chairperson) within two weeks of meeting with the instructor. The student's request must include a written statement outlining the basis for the appeal. It is the function of the chairperson to determine the relevant facts and to attempt to resolve the disagreement. The decision regarding the course grade in

question will be made by the instructor in consultation with the chairperson (or his/her stand-in). The student will receive from the department chairperson written notification of the decision within one week of the meeting with the chairperson.

- (3) If resolution has not been achieved at step two, the student or the instructor may make a written appeal to the Dean of the College within two weeks of the department chairperson's written notification. In order to resolve the disagreement, the Dean will confer with the student and the instructor in private sessions, and may call additional witnesses. If the Dean is unable to accomplish a resolution, s/he will forward the case to the Committee on Academic Standards, which will make a final decision on the matter. The Dean will communicate in writing to the student and the instructor the final decision within three weeks of receiving the appeal. This is the final step in the appeal process.

ACADEMIC LEVELS

The following table is used to determine the academic grade level of degree candidates. See page 17 for related Financial Aid information.

Year	Semester	Number of Semester Hours Earned
Freshman	1	Fewer than 12
	2	At least 12 but fewer than 24
Sophomore	1	At least 24 but fewer than 40
	2	At least 40 but fewer than 56
Junior	1	At least 56 but fewer than 76
	2	At least 76 but fewer than 96
Senior	1	At least 96 but fewer than 112
	2	More than 112

ACADEMIC STANDING

Good Academic Standing

Students will be considered in good academic standing if they meet the following standard:

Semester Hours Completed	Minimum Cumulative GPA
fewer than or equal to 16	1.70
more than 16, fewer than or equal to 32	1.80
more than 32, fewer than or equal to 48	1.90
more than 48	2.00

Probation

Students who do not meet the standards for good academic standing at the end of one semester will be placed on academic probation. Students on academic probation are required to pass ARC 100, Success Skills Workshop, if they have not already done so and are encouraged to attend programs developed by the Freshman and Sophomore deans.

Suspension

Students will be subject to suspension from the College when:

- their cumulative grade point average is below good standing for any two semesters, or
- they earn a grade point average of 1.00 or under in any one semester.

The period of suspension will be for a minimum of one full semester, not including May term or the summer sessions.

- After this time students may apply for readmission to the College. The decision for readmission will be made by the Committee on Academic Standards. Readmission is not guaranteed.
- Students readmitted after suspension will be on academic probation.
- Students readmitted after suspension who fail to meet the required standards may be dismissed.
- Students may request permission to take courses at another institution. Courses not receiving prior approval and with grades below a "C" will not be accepted for transfer.

Dismissal

Students will be subject to dismissal from the College when:

- they exceed 24 semester hours of unsuccessful course attempts (grades of F and

W) except in the case of withdrawal for documented medical or psychological reasons, or

- they cannot reasonably complete all requirements for a degree.

The standard length of dismissal will be for a period of two years.

- After this time students may apply for readmission to the College. The decision for readmission will be made by the Committee on Academic Standards. Readmission is not guaranteed.
- Students readmitted after dismissal will be on academic probation.
- Students may request permission to take courses at another institution. Courses not receiving prior approval and with grades below a "C" will not be accepted for transfer.

Probation, suspension, and dismissal become effective at the end of the semester in which the student fails to meet the academic standards listed above. The student will be notified of such action via U.S. mail. Receipt of such notice is not a prerequisite to the student's being placed on probation, suspension, or dismissal.

ACADEMIC HONESTY

The integrity of the academic process of the College requires honesty in all phases of the instructional program. The College assumes that students are committed to the principle of academic honesty. Students who fail to honor this commitment are subject to dismissal. Procedural guidelines and rules for the adjudication of cases of academic dishonesty are printed in *The Faculty Handbook* and *The Pathfinder* (the student academic handbook), copies of which are available in the library.

ACADEMIC HONORS

Dean's List

Students are admitted to the Dean's List at the end of the fall and spring semesters if they meet all of the following conditions:

- complete at least 12 semester hours for the semester
- earn a minimum grade point average of 3.50 for the semester
- do not incur grades of F
- do not incur grades of P (except in those courses graded only as P/F)
- do not repeat any courses (except those which may be repeated for credit)

Graduation Honors

Students are awarded the Bachelor of Arts degree, the Bachelor of Science degree, or the Bachelor of Science in Nursing degree with honors when they have earned the following grade point averages based on all courses attempted at Lycoming, with a minimum of 64 semester hours (16 units) required for a student to be eligible for honors:

<i>summa cum laude</i>	exactly 3.90-4.00
<i>magna cum laude</i>	exactly 3.67-3.89
<i>cum laude</i>	exactly 3.33-3.66

Academic Honor Awards, Prizes, and

Societies - Superior academic achievement is recognized through the conferring of awards and prizes at the annual Honors Convocation and Commencement and through election to membership in honor societies.

SOCIETIES

Biology	Beta Beta Beta
Business	Delta Mu Delta
Criminal Justice	Alpha Phi Sigma
Economics	Omicron Delta Epsilon
Education	Kappa Delta Pi
English	Sigma Tau Delta
Foreign Language	Phi Sigma Iota
General Academic	Phi Kappa Phi
History	Phi Alpha Theta
Nursing	Sigma Theta Tau
Philosophy	Phi Sigma Tau
Physics	Sigma Pi Sigma
Political Science	Pi Sigma Alpha
Psychology	Psi Chi
Social Science	Pi Gamma Mu
Theatre	Alpha Psi Omega

THE ACADEMIC PROGRAM

Lycoming College awards three different degrees: Bachelor of Arts (B.A.), Bachelor of Science (B.S.) and Bachelor of Science in Nursing (B.S.N.). *The degree in Nursing will be discontinued after 2003.* For students wishing to do so, multiple degrees are possible. Candidates for multiple degrees must satisfy all requirements for each degree and earn a minimum of 40 units (160 semester hours). Students who have completed fewer than 40 units but more than 32 units (128 semester hours), and who have completed all other requirements for two baccalaureate degrees from Lycoming College will receive only one baccalaureate degree. They must choose the degree to be conferred. Completed majors will be posted to the transcript.

Freshmen entering the College during the 2001-2002 academic year are subject to the requirements which appear on the following pages. Continuing students are subject to the Catalog in effect at the time of their entry unless they elect to complete the current curriculum. Students who transfer to the College with advanced standing will be subject to the requirements imposed upon other students at the College who have attained the same academic level.

Students already possessing a baccalaureate degree who are returning for a second degree will be reviewed on an individual basis by the Registrar and major department. Post-baccalaureate students will be subject to the current catalog, must complete all major requirements and related prerequisites, and may be required to complete the distribution requirements. This does not apply to non-degree students in certificate-only programs.

Students must complete the final 32 semester hours of the degree program at Lycoming College. At least 16 semester hours in the major program must be taken at Lycoming.

If a student interrupts his or her education but returns to the College after no more than one academic year has passed, he/she will retain the same requirements in effect at the initial date of entrance. A student who withdraws from the College for more than one year will, upon return, be required to complete the requirements currently imposed upon other students of the same academic level.

Lycoming College certifies three official graduation dates per calendar year: the May commencement date for those students who complete their degree requirements between January 1 and the conclusion of the Spring Semester; September 15 for those students who finish after the conclusion of the Spring Semester and by September 1; and January 1 for those students who finish between September 1 and the conclusion of the Fall Semester.

Lycoming's Commencement ceremony occurs in May. Students will be permitted to participate in the ceremony when (a) they have finished all degree requirements as of the preceding January 1, have finished all degree requirements as of the May date, or have a plan approved by the Registrar for finishing by September 1 of the same calendar year ; and (b) they are in good academic standing at the conclusion of their last semester prior to the ceremony.

Exceptions to or waivers of any requirements and/or policies listed in this Catalog must be made by the Committee on Academic Standards.

THE BACHELOR OF ARTS DEGREE

Lycoming College is committed to the principle that a liberal arts education is the ideal foundation for an informed and productive life. The liberal arts - including the fine arts, the humanities, mathematics, the natural and social sciences - have created the social, political, economic and intellectual systems which help define contemporary existence. Therefore, it is essential that students grasp the modes of inquiry and knowledge associated with these disciplines.

Consequently, the Bachelor of Arts degree is conferred upon the student who has completed an educational program incorporating the two principles of the liberal arts known as distribution and concentration. The objective of the distribution principle is to insure that the student achieves breadth in learning through the study of the major dimensions of human inquiry: the humanities, the social sciences, and the natural sciences. The objective of the concentration principle is to provide depth of learning through completion of a program of study in a given discipline or subject area known as the major. The effect of both principles is to impart knowledge, inspire inquiry, and encourage creative thought.

Requirements For Graduation

Every B.A. degree candidate is expected to meet the following requirements in order to qualify for graduation:

- Complete the distribution program.
- Complete the Writing Across the Curriculum Program requirements.
- Earn one year of credit in Physical Activities, Wellness, and Community Service. Athletic training courses or Military Science 011, 021, 031, or 041 may satisfy this requirement.

- Complete a major consisting of at least eight unit courses (32 semester hours). Students must pass every course required for the major and have a minimum major grade point average of 2.00.
- Pass a minimum of 32 units (128 semester hours) with a minimum cumulative grade point average of 2.00. Additional credits beyond 128 semester hours may be completed provided that the minimum 2.00 cumulative average is maintained.
- Complete *in residence* the final eight courses (32 semester hours) offered for the degree at Lycoming.
- Satisfy all financial obligations incurred at the College.

THE BACHELOR OF SCIENCE DEGREE

The Bachelor of Science degree is available to students majoring in Biology, Chemistry, or Computer Science. Students may elect either the B.A. or the B.S. degree in these majors. The B.S. degree is appropriate for students planning further education in a graduate or professional school.

Requirements For Graduation

Every B.S. degree candidate is expected to meet the following requirements in order to qualify for graduation:

- Complete the B.S. major in either Biology, Chemistry, or Computer Science as described on page 68, 81 and 118 respectively. Students must pass every course required for the major and have a minimum major grade point average of 2.00.
- Complete the distribution program.
- Complete the Writing Across the Curriculum Program requirements.
- Earn one year of credit in Physical Activities, Wellness, and Community Service. Athletic Training courses or Military Science 011, 021, 031 or 041 may satisfy this requirement.
- Pass a minimum of 32 units (128 semester hours) with a minimum grade point average of

- 2.00. Additional credits beyond 128 semester hours may be completed provided that the minimum 2.00 cumulative average is maintained.
- Complete *in residence* the final eight courses (32 semester hours) offered for the degree at Lycoming.
- Satisfy all financial obligations incurred at the College.

THE BACHELOR OF SCIENCE IN NURSING DEGREE

The program of study leading to the Bachelor of Science in Nursing degree is designed to prepare men and women as beginning practitioners of professional nursing, qualified for first-level positions in a variety of health settings and for graduate study in nursing. Upon satisfactory completion of the program, a graduate is eligible to write the State Board of Nursing examination for licensure as a registered nurse. The goal of the program is to develop a liberally-educated and self-directed individual who is prepared to contribute to the welfare of the nation through the practice of professional nursing, which supports the promotion and restoration of the health of individuals and families in a variety of settings.

PROGRAM NOTE: *The Bachelor of Science in Nursing degree will be discontinued as of August 2003. In order to enter the Nursing program, a student must complete all degree requirements (distribution, major, and electives by the end of August 2003).*

Requirements For Graduation

Every B.S.N. degree candidate is expected to meet the following requirements in order to qualify for graduation:

- Complete the Nursing major as described on page 130. Students must pass every course required for the major and have a minimum major grade point average of 2.00.
- Complete the distribution program.
- Complete the Writing Across the Curriculum Program requirements.

- Pass a minimum of 32 units (128 semester hours) with a minimum cumulative average of 2.00.
- Earn one year of credit in Physical Activities, Wellness and Community Service. Athletic training or Military Science 011, 021, 031 or 041 may satisfy this requirement.
- Complete *in residence* the final eight courses (32 semester hours) offered for the degree at Lycoming.
- Satisfy all financial obligations incurred at the College.

THE DISTRIBUTION PROGRAM

The Distribution Program for the B.A., B.S., and B.S.N. Degrees

A course can be used to satisfy only one distribution requirement (except in the Cultural Diversity area). Courses for which a grade of "P" is recorded may not be used toward the fulfillment of the distribution requirements. (Refer to page 26 for an explanation of the grading system.) No more than two courses used to satisfy the distribution requirements may be selected from the same department, except for ENGL 105 and 106 or 107 and Foreign Language Courses numbered below 222.

A course in any of the following distribution requirements refers to a full-unit course (four semester hours) taken at Lycoming, any appropriate combination of fractional unit courses taken at Lycoming which accumulate to four semester hours, any appropriate course which is taken by cross-registration, any appropriate course which is part of an approved off-campus program (such as those listed in the catalog sections titled COOPERATIVE PROGRAMS, SPECIAL ACADEMIC OPPORTUNITIES, and STUDY ABROAD PROGRAMS) or any approved course transferred from another institution.

Special distribution requirements which apply to students in the Lycoming Scholar Program appear on page 41. For information regarding CLEP and AP credit see page 24.

A. English - Students are required to pass ENGL 105, unless exempted on the basis of the college's placement examination, and ENGL 106 or 107. ENGL 105 and ENGL 106 or 107 must be taken during the freshman year unless the student does not successfully complete ENGL 105 during the first semester.

B. Fine Arts - Students are required to pass two courses (or the equivalent) from Art, Creative Writing, Literature, Music, and/or THEA 100, 114, 148, 212, 332, 333, 335.

C. Foreign Language - Students are required to pass a course in French, German, Greek, Hebrew, or Spanish numbered 101, unless exempted on the basis of placement, and a course numbered above 101 in the same language. Placement at the appropriate course level will be determined by the faculty of the Department of Foreign Languages and Literatures.

D. Humanities - Students are required to pass four courses from History, Literature, including THEA 333 and 335, Philosophy, and/or Religion. At least one course must be successfully completed in 3 of the 4 disciplines.

E. Mathematics - Students are required to demonstrate competence in basic algebra and to pass one course selected from CPTR 108, MATH 106, 109, 112, 116, 123, 128, 129, 130, or 214. The requirement of competence in basic algebra must be met before the end of the fourth semester or within one year of entry, whichever is later. Students that have not met this competency requirement before the final semester of the applicable time period must register for MATH 100 in that semester.

New students take the mathematics placement examination determined by the Department of Mathematical Sciences at a new-student orientation session. Those who

do not pass this exam may take home a computerized study guide and take another exam at a specified time.

After beginning classes at Lycoming College, a student may satisfy the basic algebra competence requirement by successful completion of MATH 100 at Lycoming, or of an approved course transferred from another college, or by passing a competence examination administered by the Department of Mathematical Sciences. Enrolled students may take this examination only once during a semester and may be subject to a testing fee. No student will be permitted to take this examination while enrolled in MATH 100.

F. Natural Sciences - Students are required to pass two laboratory courses chosen from Astronomy/Physics, Biology, and/or Chemistry.

G. Social Sciences - Students are required to pass two courses from Criminal Justice, Economics, Political Science, Psychology, or Sociology-Anthropology.

H. Cultural Diversity - Students are required to pass one designated course which introduces students to Cultural Diversity which are distinct from the predominant Anglo-American culture. The course selected to fulfill this requirement may also be used to satisfy one of the other general education requirements in the liberal arts. Students also may fulfill the cultural diversity requirement by successfully completing at least one full-time semester (12 semester hours) in a college-accepted study abroad program.

The following courses have been approved to be offered as cultural diversity courses and will be offered as such. Students must check semester class schedules to determine which courses are offered as "D" (cultural diversity) courses for that semester.

ART	ART 222, 339
BUSINESS	BUS 244, 319
ENGLISH	ENGL 334
FRENCH	FRN 228

GERMAN	GERM 221, 222
HISTORY	HIST 120, 140, 220 230, 240
MUSIC	MUS 116, 128, 234
POLITICAL SCIENCE	PSCI 221, 327, 340
PSYCHOLOGY	PSY 341
RELIGION	REL 110, 224, 225, 226, 228
SOCIOLOGY-	SOC 229, 331, 334,
ANTHROPOLOGY	335, 336, 337
SPANISH	SPAN 221, 222, 311
THEATRE	THEA 114, 212, 332, 333, 335, 410
WOMEN'S STUDIES	WMST 200

Writing Across The Curriculum Program

I. Purpose

The Lycoming College Writing Across the Curriculum Program has been developed in response to the conviction that writing skills promote intellectual growth and are a hallmark of the educated person. The program has therefore been designed to achieve two major, interrelated objectives:

- 1) to enhance student learning in general and subject mastery in particular, and
- 2) to develop students' abilities to communicate clearly. In this program, students are given opportunities to write in a variety of contexts and in a substantial number of courses, in which they receive faculty guidance and reinforcement.

II. Program Requirements

Students must successfully complete the following writing requirements:

- 1) ENGL 105 or exemption from the course.
- 2) ENGL 106 (Composition) or ENGL 107 (Honors Composition).
- 3) A writing component in all distribution courses completed at Lycoming.
- 4) Three courses designated as writing-intensive, or "W" courses.
 - Successful completion of ENGL 106 or 107 is a prerequisite for enrollment in writing-intensive courses.

- All courses designated "W" are numbered 200 or above.
- One of the student's "W" courses must be in his/her major (or one of the majors) or with departmental approval from a related department. Not all three can be from the same major.

III. Approved Writing Intensive Courses

The following courses have been approved to be offered as writing intensive courses and may be offered as such. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

ACCOUNTING	ACCT 223, 224, 442
AMERICAN STUDIES	HIST 443
ART	ART 222, 223, 331, 333, 334, 336, 339
ASTRONOMY	ASTR 230
BIOLOGY	BIO 222, 224
BUSINESS	BUS 244, 330, 340, 342, 344, 441
CHEMISTRY	CHEM 330, 331, 332
COMMUNICATION	COMM 211, 326
COMPUTER SCIENCE	CPTR 246, 247, 346, 448
CRIMINAL JUSTICE	CJ 447, PHIL 218, SOC 222
ECONOMICS	ECON 337, 440
EDUCATION	EDUC 343, 344, 447
ENGLISH	ENGL 225, 311, 331, 334, 335, 336, 420
FRENCH	FRN 222
GERMAN	GERM 431, 441
HISTORY	HIST 218, 230, 247, 332, 335, 443, 449
INTERNATIONAL STUDIES	INST 449
MATHEMATICS	MATH 234
MUSIC	MUS 336
NEAR EAST CULTURE	ART 222
NURSING	NURS 221, 432/433, 435

PHILOSOPHY	PHIL 216, 217, 218, 219, 301, 332, 333, 334, 335, 336, 340
PHYSICS	PHYS 338, 447
POLITICAL SCIENCE	PSCI 334, 400
PSYCHOLOGY	PSY 225, 324, 333, 431, 432, 436
RELIGION	REL 230, 331, 337
SOCIOLOGY-	SOC 222, 228, 229, 230, 331
ANTHROPOLOGY	
SPANISH	SPAN 323, 418, 424, 426
THEATRE	THEA 212, 332, 333

Physical Activities, Wellness, and Community Service Program

I. Purpose

This program is designed to promote students' physical welfare, health awareness, and to encourage a sense of civic responsibility.

II. Program Requirements

Students must pass any combination of two semesters of course work selected from the following:

1. Designated physical activities courses,
2. Designated varsity athletics,
3. Designated wellness courses,
4. Designated community service projects,
5. Designated military science courses.

CONCENTRATION

The Major

Students are required to complete a series of courses in one departmental or interdisciplinary (established or individual) major. Specific course requirements for each major offered by the College are listed in the curriculum section of this catalog. Students must earn a 2.00 or higher cumulative grade point average in the major. Students must declare a major by the beginning of their junior year. Departmental and established interdisciplinary majors are declared in the Office of the Registrar, whereas individual interdisciplinary majors must be approved by the Committee on Curriculum

Development. Students may complete more than one major, each of which will be recorded on the transcript. Students may be removed from major status if they are not making satisfactory progress in their major. This action is taken by the Dean of the College upon the recommendation of the department, coordinating committee (for established interdisciplinary majors), or Curriculum Development Committee (for individual interdisciplinary majors). The decision of the Dean of the College may be appealed to the Committee on Academic Standards by the student involved or by the recommending department or committee. Students pursuing majors in two different degrees are subject to the policy for dual degrees on page 29.

Departmental Majors — The following Departmental majors are available:

Accounting
 Art History
 Art Studio
 Astronomy
 Biology
 Business Administration
 Chemistry
 Communication
 Computer Science
 Economics
 English
 French
 German
 History
 Mathematics
 Music
 Nursing *
 Philosophy
 Physics
 Political Science
 Psychology
 Religion
 Sociology-Anthropology
 Spanish
 Theatre

* The degree in Nursing will be discontinued after 2003.

Established Interdisciplinary Majors — The following established interdisciplinary majors include course work in two or more departments:

Accounting-Mathematical Sciences
 Actuarial Mathematics
 American Studies
 Criminal Justice
 International Studies
 Literature
 Near East Culture and Archaeology

Individual Interdisciplinary Majors —

Students may design majors which are unique to their needs and objectives and which combine course work in more than one department. These majors are developed in consultation with students' faculty advisors and with a panel of faculty members from each of the sponsoring departments. The applications are acted upon by the Curriculum Development Committee. The major normally consists of 10 courses beyond those taken to satisfy the distribution requirements. Students are expected to complete at least six courses at the junior or senior level. Examples of individual interdisciplinary majors are: Legal Studies, Western History and Archaeology, Women and the Legal System, and Religion and Marketing.

The Minor

The College awards two kinds of minors, departmental and interdisciplinary, in recognition of concentrated course work in an area other than the student's major. All minors are subject to the following limitations:

- A minor must include at least two courses which are not counted in the student's major.
- A student may receive at most two minors.
- Students with two majors may receive only one minor; students with three majors may not receive a minor.
- Students may not receive a minor in their major discipline unless their major discipline is Art and the minor is Art History or their major is Biology and the minor is Environmental Science. (A discipline is any

course of study in which a student can major. Tracks within majors are not separate disciplines.)

A student may not receive a minor unless his/her average in the courses which count for his/her minor is a minimum of 2.00. Courses taken P/F may not be counted toward a minor.

Students must declare their intention to minor by signing a form available in the Registrar's Office, obtaining required faculty signatures, and returning the completed form to the Office of the Registrar.

When students complete a minor, the title will be indicated on their official transcript. Students must meet the requirements for the minor which are in effect at the time they declare a minor or which are in effect subsequent to that time before they graduate.

Departmental Minors — Requirements for a departmental minor vary from department to department. Students interested in pursuing a departmental minor should consult that department for its policy regarding minors.

Departmental minors are available in the following areas:

ACCOUNTING

ART

Art History

Commercial Design

Painting

Photography

Sculpture

ASTRONOMY

BIOLOGY

Biology

Environmental Science

BUSINESS ADMINISTRATION

Marketing

Finance

General Management

CHEMISTRY

COMMUNICATION

ECONOMICS

ENGLISH

Literature

Writing

FOREIGN LANGUAGES AND LITERATURES

French

German

Spanish

HISTORY

American History

European History

History

MATHEMATICAL SCIENCES

Computer Science

Mathematics

PHILOSOPHY

Philosophy

Philosophy and Law

Philosophy and Science

PHYSICS

POLITICAL SCIENCE

Political Science

World Politics

Legal Studies

PSYCHOLOGY

RELIGION

SOCIOLOGY-ANTHROPOLOGY

THEATRE

Theatre History and Literature

Performance

Technical Theatre

Interdisciplinary Minors — Interdisciplinary minors include course work in two or more departments. Students interested in interdisciplinary minors should consult the faculty coordinator of that minor. Interdisciplinary minors are available in the following areas: BIBLICAL LANGUAGES, CRIMINAL JUSTICE, and WOMEN'S STUDIES.

PRE-PROFESSIONAL PROGRAMS

(also see "Pre-Professional Advising" in The Advising Program section)

Preparation for Educational Professions — Lycoming College believes that the liberal arts

provide the best preparation for future teachers. Thus, all education students complete a liberal arts major in addition to the Lycoming College Teacher Education Certificate requirements. Students can be certified in elementary education or one or more of the following secondary areas: art (K-12), biology, chemistry, English, French, general science (with biology or astronomy/physics tracks), German, mathematics, music (K-12), physics, social studies, and Spanish. All teacher education programs are approved by the Pennsylvania Department of Education. Pennsylvania certificates are recognized in most other states either through reciprocal agreements or by transcript evaluation. See the Education Department listing on page 96.

Preparation for Health Professions — The program of pre-professional education for the health professions (allopathic, dental, osteopathic, podiatric and veterinary medicine; optometry, and pharmacy) is organized around a sound foundation in biology, chemistry, mathematics, and physics and a wide range of subject matter from the humanities, social sciences, and fine arts. At least three years of undergraduate study is recommended before entry into a professional school; the normal procedure is to complete the Bachelor of Arts degree.

Students interested in one of the health professions or in an allied health career should make their intentions known to the Admissions Office when applying and to the Health Professions Advisory Committee (HPAC) during their first semester (see page 45).

Preparation for Legal Professions — Lycoming offers a strong preparation for students interested in law as a profession. Admission to law school is not predicated upon a particular major or area of study; rather, a student is encouraged to design a course of study (traditional or interdisciplinary major) which is of personal interest and significance. While no specific major is

recommended, there are certain skills of particular relevance to the pre-law student: clear writing, analytical thinking, and reading comprehension. These skills should be developed during the undergraduate years.

Pre-law students should register with the Legal Professions Advisory Committee (LPAC) during their first semester (see page 45).

Preparation for Theological Professions

Students preparing to attend a theological seminary should examine the suggestions set down by the Association of Theological Schools. It is recommended that students pursue a broad program in the liberal arts with a major in one of the humanities (English, history, languages, literature, philosophy, religion) or one of the social sciences (American studies, criminal justice, economics, international studies, political science, psychology, sociology-anthropology). Students preparing for a career in religious education should major in religion and elect five or six courses in psychology, education and sociology. This program of study will qualify students to work as educational assistants or directors of religious education after graduate study in a theological seminary.

Students should register with the Theological Professions Advisory Committee (TPAC) during their first semester. TPAC acts as a "center" for students, faculty, and clergy to discuss the needs of students who want to prepare themselves for the ministry, religious education, advanced training in religion, or related vocations (see page 45).

COOPERATIVE PROGRAMS

Lycoming has developed several cooperative programs to provide students with opportunities to extend their knowledge, abilities, and talents in selected areas through access to the specialized academic programs and facilities of other colleges, universities, academies and hospitals. Although thorough advising and curricular planning are provided for each of

the cooperative programs, admission to Lycoming and registration in the program of choice do not guarantee admission to the cooperating institution. The prerogative of admitting students to the cooperative aspect of the program rests with the cooperating institution. Students who are interested in a cooperative program should contact the coordinator during the first week of the first semester of their enrollment at Lycoming. This is necessary to plan their course programs in a manner that will ensure completion of required courses according to the schedule stipulated for the program. All cooperative programs require special coordination of course scheduling at Lycoming.

Engineering — Combining the advantages of liberal arts education and the technical training of an engineering curriculum, this program is offered in conjunction with The Pennsylvania State University and Washington University at St. Louis. Students complete three years of study at Lycoming and two years at the cooperating university. Upon satisfactory completion of the first year of engineering studies, Lycoming awards a Bachelor of Arts degree. When students successfully complete the second year of engineering studies, the cooperating university awards a Bachelor of Science degree in engineering.

At Lycoming, students complete the distribution program and courses in physics, mathematics, and chemistry. The Pennsylvania State University offers aerospace, agricultural, ceramic, chemical, civil, computer, electrical, engineering science, industrial, mechanical, mining and nuclear engineering. Similar offerings are available at Washington University at St. Louis.

Forestry or Environmental Studies — Lycoming College offers a cooperative program with Duke University in environmental management and forestry. Qualified students can earn the baccalaureate and master

degrees in five years, spending three years at Lycoming and two years at Duke. All Lycoming distribution and major requirements must be completed by the end of the junior year. At the end of the first year at Duke, a baccalaureate degree will be awarded by Lycoming. Duke will award the professional degree of Master of Forestry or Master of Environmental Management to qualified candidates at the end of the second year.

The major program emphases at Duke are Forest Resource Management, Resource Economics and Policy, and Resource Ecology.

The program is flexible enough, however, to accommodate a variety of individual designs. An undergraduate major in one of the natural sciences, social sciences, or business may provide good preparation for the programs at Duke, but a student with any undergraduate concentration will be considered for admission. All students need at least two courses each in biology, mathematics, and economics.

Students begin the program at Duke in July after their junior year at Lycoming with a one-month session of field work in natural resource management. They must complete a total of 48 units which generally takes four semesters.

Some students prefer to complete the baccalaureate degree before undertaking graduate study at Duke. The master degree requirements for these students are the same as for those students entering after the junior year, but the 48-unit requirement may be reduced for completed relevant undergraduate work of satisfactory quality. All credit reductions are determined individually and consider the students' educational background and objectives.

Medical Technology - Students desiring a career in medical technology may either complete a Bachelor of Arts or a Bachelor of Science program followed by a clinical internship at any hospital accredited by the American Medical Association, or they may complete the cooperative program. Students

electing the cooperative program normally study for three years at Lycoming, during which time they complete 24 unit courses, including the College distribution requirements, a major, and requirements of the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). The current requirements of the NAACLS are: four courses in chemistry (one of which must be either organic or biochemistry); four courses in biology (including courses in microbiology and immunology), and one course in mathematics.

Students in the cooperative program usually major in biology, following a modified major of six unit courses that exempts them from Ecology (BIO 224) and Plant Sciences (BIO 225). Students must take either Microbiology (BIO 321) or Microbiology for the Health Sciences (BIO 226), and either Human Physiology (BIO 323) or Cell Biology (BIO 435). The cooperative program requires successful completion of a one-year internship at a hospital accredited by the American Medical Association. Lycoming is affiliated with the following accredited hospitals: Divine Providence, Rolling Hill, Robert Packer, Lancaster, and Abington. Students in the cooperative program receive credit at Lycoming for each of eight courses in biology and chemistry successfully completed during the clinical internship. Successful completion of the Registry Examination is not considered a graduation requirement at Lycoming College.

Students entering a clinical internship for one year after graduation from Lycoming must complete all of the requirements of the cooperative program, but are not eligible for the biology major exemptions indicated above. Upon graduation, such students may apply for admission to a clinical program at any hospital.

Optometry — Through the Accelerated Optometry Education Curriculum Program, students interested in a career in optometry

may qualify for admission to the Pennsylvania College of Optometry after only three years at Lycoming College.

After four years at the Pennsylvania College of Optometry, a student will earn a Doctor of Optometry degree. Selection of candidates for the professional segment of the program is completed by the admissions committee of the Pennsylvania College of Optometry during the student's third year at Lycoming. (This is one of two routes that students may choose. Any student, of course, may follow the regular application procedures for admission to the Pennsylvania College of Optometry or another college of optometry to matriculate following completion of his or her baccalaureate program.) During the three years at Lycoming College, the student will complete 24 unit courses, including all distribution requirements, and will prepare for his or her professional training by obtaining a solid foundation in biology, chemistry, physics, and mathematics. During the first year of study at the Pennsylvania College of Optometry, the student will take 39 semester hours of basic science courses in addition to introductions to optometry and health care. Successful completion of the first year of professional training will complete the course requirements for the B.A. degree at Lycoming College.

Most students will find it convenient to major in biology in order to satisfy the requirements of Lycoming College and the Pennsylvania College of Optometry. Such students are allowed to complete a modified biology major which will exempt them from two biology courses: Ecology (BIO 224) and Plant Sciences (BIO 225). (This modified major requires the successful completion of the initial year at the Pennsylvania College of Optometry.) Students desiring other majors must coordinate their plans with the Health Professions Advisory Committee in order to ensure that they have satisfied all requirements.

Podiatry — Students interested in podiatry may either seek admission to a college of podiatric medicine upon completion of the Bachelor of Arts degree or through the Accelerated Podiatric Medical Education Curriculum Program (APMEC). The latter program provides an opportunity for students to qualify for admission to the Pennsylvania College of Podiatric Medicine (PCPM) or the Ohio College of Podiatric Medicine (OCPM) after three years of study at Lycoming. At Lycoming, students in the APMEC program must successfully complete 24 unit courses, including the distribution requirements and a basic foundation in biology, chemistry, physics, and mathematics. During the first year of study at PCPM or OCPM, students must successfully complete a program of basic science courses and an introduction to podiatry. Successful completion of the first year of professional training will contribute toward the fulfillment of the course requirements for a Bachelor of Arts degree at Lycoming.

Students in the cooperative program who major in biology will be allowed to complete a modified major which will exempt them from two biology courses: Ecology (BIO 224) and Plant Sciences (BIO 225). This modified major requires the successful completion of the initial year at PCPM or OCPM.

Students interested in a career in podiatric medicine should indicate their intentions to the Health Professions Advisory Committee.

U.S. Army Reserve Officers Training Corps Program (R.O.T.C.)

The program provides an opportunity for Lycoming students to enroll in R.O.T.C. Lycoming notes enrollment in and successful completion of the program on student transcripts. Military Science is a four-year program divided into a basic course given during the freshman and sophomore years and an advanced course given during the junior and senior years. Students who have not completed the basic course may qualify for the advanced course by

completing summer camp between the sophomore and junior years. Students enrolled in the advanced course receive an annual stipend of \$1,000. One course each in written communication, human behavior, and military history will fulfill the professional military education requirements. R.O.T.C. scholarship cadets must also complete one semester of a foreign language.

Students successfully completing the advanced course and advanced summer camp between the junior and senior years will qualify for a commission as a Second Lieutenant in the United States Army upon graduation, and will incur a service obligation in the active Army or Army Reserves. The only expense to the student for this program is the \$75 uniform deposit, which is refundable, less costs.

THE HONORS PROGRAM

The Scholar Program

The Lycoming College Scholar Program is a special program designed to meet the needs and aspirations of highly motivated students of superior intellectual ability. The Lycoming Scholar satisfies the College's distribution requirements, generally on a more exacting level and with more challenging courses than the average student. Lycoming Scholars also participate in special interdisciplinary seminars and in serious independent study culminating in a senior project. Scholars may audit a fifth course each semester at no additional cost. In addition, Scholars may be exempted from the usual limitations on independent studies by the Individual Studies Committee.

Students are admitted to the program by invitation of the Scholar Council, the group which oversees the program. The council consists of a director and four other faculty selected by the Dean of the College, and four students elected by current scholars. The guidelines governing selection of new scholars are flexible; academic excellence, intellectual curiosity, and creativity are all taken into

account. Students who desire to participate in the Scholar Program but are not invited may petition the Scholar Council for consideration. Petitioning students should provide the Scholar Council with letters of recommendation from Lycoming faculty and a transcript to be sent to the director of the Scholar Program.

To remain in the program, students must maintain a cumulative average of 3.00 or better. Students who drop below this average will be placed on Scholar probation for one semester. After one semester, they will be asked to leave the program if their GPA has not returned to 3.00 or higher. To graduate as a Scholar, a student must have at least a 3.00 cumulative average. Scholars must successfully complete five Lycoming Scholars Seminars, as well as the non-credit Senior Scholar Seminar in which they present the results of their independent studies. In addition, the following distribution requirements must be met.

Scholar Distribution Requirements for Students in B.A., B.S., and B.S.N. Programs

A. English - Scholars must complete ENGL 106 or ENGL 107. The Scholar Council strongly recommends that qualified scholars enroll in ENGL 107 if scheduling permits. ENGL 106 or 107 must be taken during the freshman year.

B. Fine Arts - Scholars are required to pass two courses (or the equivalent) from the following: Art: ART 111, 115, 220 or higher; Music: MUS 117, 135 or higher; Theatre: THEA 114 or higher, excluding THEA 148; Creative Writing: ENGL 240, 322, 342, 411, 412, 441 or 442; Literature: Any English Literature course (except ENGL 215) and the literature courses of the Department of Foreign Languages and Literatures (French, German, or Spanish).

C. Foreign Language - Scholars are required to pass a course in French, German, Greek, Hebrew, or Spanish numbered 111 or higher. Placement at the appropriate course level will

be determined by the faculty of the Department of Foreign Languages and Literatures. Scholars who have completed two or more years of a given language in high school are not admitted for credit to the elementary course in the same foreign language except by written permission of the chairman of the department.

D. Humanities - Scholars are required to pass four courses from three of the following disciplines: History: any course numbered 200 or higher; Literature: any English literature course (except ENGL 215) and the literature courses of the Department of Foreign Languages and Literatures (French, German, or Spanish); Philosophy: any course numbered 200 or higher; Religion: any course numbered 222 or higher.

E. Mathematics - Scholars must earn at least grade of B (3.00) in one of MATH 103, 106, 109, 112, or CPTR 108; or successfully complete one of MATH 116, 128, 129, 130, or 214.

F. Natural Sciences - Scholars are required to pass two laboratory courses from the following: Astronomy/Physics: any course numbered 111 or higher; Biology: any course numbered 110 or higher; Chemistry: any course numbered 110 or higher.

G. Social Sciences - Scholars are required to pass two courses from the following: Economics: any course numbered 110 or higher; Political Science: any course numbered 106 or higher; Psychology: PSY 110 or any other PSY course numbered 225 or higher. Sociology-Anthropology: any course from 110, 220, 229, 300 or higher.

H. Cultural Diversity - Scholars are required to pass one designated course which introduce students to Cultural Diversity which is distinct from the dominant western culture. Approaches to study may be artistic, historical, sociological, anthropological, international, psychological, or issues oriented. The course selected to fulfill this requirement may also be used to

satisfy one of the other general education requirements in the liberal arts.

L. Writing Across the Curriculum. This requirement is the same as that stipulated by the College for all students.

M. Physical Activities, Wellness and Community Service. This requirement is the same as that stipulated by the College for all students.

N. Lycoming Scholar Seminars — Team-taught interdisciplinary seminars are held every semester under the direction of the Lycoming Scholar Council. They meet for one hour each week (Tuesdays at noon) and carry one hour of credit. Grades are "A/F" and are based on students' performance. Lycoming Scholars are required to successfully complete five seminars and they are permitted to register for as many as eight. Topics for each academic year will be selected by the Scholar Council and announced before spring registration of the previous year. Students must be accepted into the Scholar Program before they enroll in a Scholar Seminar. Scholars are strongly urged to register for at least one seminar during the freshman year.

O. Senior Project — In the senior year, scholars must successfully complete an independent studies or departmental honors project which has been approved in advance by the Independent Studies Committee and the Scholar Council. This project must be presented orally as part of the Senior Scholar Seminar and be accepted by the Scholar Council.

P. Major — Scholars must complete a major and 32 units (128 semester hours), exclusive of the Senior Scholar Seminar.

Note to Transfer Students — In the case of transfer students and those who seek to enter the program after their freshman year and in other cases deemed by the Scholar Council to involve special or extraordinary circumstances, the Council shall make adjustments to the scholar distribution requirements provided

that in all cases such exceptions and adjustments would still satisfy the regular College distribution requirements.

Management Scholars Program of the Institute for Management Studies

The IMS sponsors a Management Scholars Program for academically talented students in the three IMS departments. To join the Management Scholars Program, a student must satisfy the following criteria:

- a) Have a declared major or minor in one or more of the IMS departments. However, the IMS Director may invite or permit other students to join the Management Scholars Program who do not meet this criteria, such as freshmen who have not yet declared a major or minor.
- b) Have an overall GPA of 3.25 or higher, or exhibit strong academic potential if the student is a first-semester freshman.

To graduate as a Management Scholar, a student must meet the following criteria:

- a) Successfully complete two semester-hours of Management Scholar Seminars.
- b) Successfully complete a major or minor in one of the three IMS departments.
- c) Graduate with a GPA of 3.25 or higher in both overall college work, and within an IMS major and/or minor.
- d) Successfully complete an appropriate internship, practicum or independent study, or complete a special project approved by the IMS Director.

At least one Management Scholar Seminar is taught per academic year on an interdisciplinary topic of relevance to students in all three IMS departments. The seminars are offered as one semester-hour courses and do not result in overload charges for full-time students.

Students who are currently Lycoming College Scholars may also become Management Scholars and participate in both programs.

Nursing Scholars Program

The Department of Nursing offers a program for those students who excel academically. To graduate as a Nursing Scholar, a student must:

- a. Demonstrate continued participation in activities sponsored by the Center for Nursing Excellence (CNE).
- b. Achieve a GPA of 3.25 or higher in both overall college work and within the nursing major.
- c. Successfully complete an approved internship, practicum, or independent or honors study.
- d. Demonstrate those qualities most becoming a professional nurse, including a commitment to the profession and community service.

Students who are Lycoming College Scholars may become Nursing Scholars and participate in both programs.

Departmental Honors

Honors projects are normally undertaken only in a student's major, and are available only to exceptionally well-qualified students who have a solid background in the area of the project and are capable of considerable self-direction and have a GPA of at least 3.00. The prerequisites for registration in an honors program are as follows:

- A faculty member from the department(s) in which the honors project is to be undertaken must agree to be the director and must secure departmental approval of the project.
- The director, in consultation with the student, must convene a committee consisting of two faculty members from the department in which the project is to be undertaken, one of whom is the director of the project, and one faculty member from each of two other departments related to the subject matter of the study.
- The Honors Committee must then certify by their signatures on the application that the project in question is academically legit-

mate and worthy of pursuit as an honors project, and that the student in question is qualified to pursue the project.

- The project must be approved by the Committee on Individual Studies.

Students successfully complete honors projects by satisfying the following conditions in accordance with guidelines established by the Committee on Individual Studies:

- The student must produce a substantial research paper, critical study, or creative project. If the end product is a creative project, a critical paper analyzing the techniques and principles employed and the nature of the achievement represented in the project shall be also submitted.
- The student must successfully explain and defend the work in a final oral examination given by the honors committee.
- The Honors Committee must certify that the student has successfully defended the project, and that the student's achievement is clearly superior to that which would ordinarily be required to earn a grade of "A" in a regular independent studies course.
- The Committee on Individual Studies must certify that the student has satisfied all of the conditions mentioned above.

Except in unusual circumstances, honors projects are expected to involve independent study in two consecutive unit courses.

Successful completion of the honors project will cause the designation of honors in that department to be placed upon the permanent record. Acceptable theses are deposited in the College library. In the event that the study is not completed successfully or is not deemed worthy of honors, the student shall be re-registered in independent studies and given a final grade for the course.

THE ADVISING PROGRAM

Academic Advising

One advantage of a small college is the direct, personal contact between a student and

the College faculty who care about that student's personal, academic, and professional aspirations. The student can draw upon their years of experience to resolve questions about social adjustment, workload, study skills, tutoring and more. Perhaps the member of the faculty with the most impact on a student is the academic advisor.

The freshman advisor, whom the student meets at summer orientation, assists with course selection by providing accurate information about requirements, programs and career options. Advisors help students to identify other campus resources. Health Services can supply counseling support for students with personal adjustment issues.

During the sophomore year, the student must choose a major and select an advisor from the major department. The new advisor, while serving as a resource, can best advise that student about course selection and career opportunities.

Advisors at Lycoming endeavor to contribute to students' development in yet another way. They insist that students assume full responsibility for their decisions and academic progress. By doing so, they help to prepare them for the harder choices and responsibilities of the professional world.

Also, Lycoming provides special advising programs for careers in medicine, law and religion. Interested students should register with the appropriate advisory committee immediately after deciding to enter one of these professions.

Pre-Professional Advising (also see "Pre-Professional Programs" in the Concentration section)

Preparation for Educational Professions —
Students interested in obtaining teacher certification should consult with a member of the Education Department as early as possible. See the Education Department listing on page 96.

Preparation for Health Professions —

Students interested in one of the health professions or in an allied health career should make their intentions known to the Admissions Office when applying and to the Health Professions Advisory Committee (HPAC) during their first semester. This committee advises students concerning preparation for and application to health-professions schools. All pre-health professions students are invited to join the student Pre-Health Professions Association. See also descriptions of the nursing program and of the cooperative programs in podiatric medicine, optometry, and medical technology.

Preparation for Legal Professions —

Students interested in pre-law should register with the Legal Professions Advisory Committee (LPAC) during their first semester and should join the Pre-Law Society on campus. LPAC assists the pre-law student through advising, compilation of recommendations, and dissemination of information and materials about law and the legal profession. The Pre-Law Society sponsors films, speakers, and field trips including visits to law school campuses.

Preparation for Theological Professions —

Students who plan to investigate the religious vocations should register with the Theological Professions Advisory Committee (TPAC) during their first semester. TPAC acts as a "center" for students, faculty, and clergy to discuss the needs of students who want to prepare themselves for the ministry, religious education, advanced training in religion, or related vocations. Also, it may help coordinate internships for students who desire practical experience in the parish ministry or related areas.

ACADEMIC SUPPORT SERVICES

Academic Resource Center (ARC)

Daniel Hartsock, Director

The Academic Resource Center, located on the second floor of the Fine Arts Building, provides a variety of free services to the campus community.

Writing Center — Working one-on-one, Writing Tutors use questioning techniques to help others improve individual papers while developing confidence and independence as writers. Other services include the Paper File, a file of graded essays maintained by course; the Writing Room, a quiet place for writers to work; self-paced, computer assisted typing instruction; and the Documentation Style Manual for use when citing sources on research projects.

Tutoring Center — The ARC provides one-on-one peer tutoring in math, foreign languages, and sciences on a walk-in basis and peer tutoring by arrangement in other subjects. Tutors assist students with homework assignments and exam review.

Survival Skills Program — The ARC and volunteer faculty conduct a group of study skills workshops on time management, note-taking from lectures, reading textbooks, successful study techniques and Microsoft Word.

100

SUCCESS SKILLS WORKSHOP

A seven-week course, the workshop introduces students to a variety of topics important to student success. Among these are time management, learning styles, motivation, highlighting text, note-taking, and word-processing. Topics will be selected to meet students' needs. ARC 100 is highly recommended for students who, in consultation with

their academic advisors, choose to improve their academic skills. *This noncredit course will be graded on a pass/fail basis.*

Office of the Assistant Dean for Freshmen

Lycoming College believes a student's freshman year needs structure and support. This office serves as a focal point for the freshman and his or her family.

Freshman Orientation — The purpose of this required program is to acquaint new students and their families more fully with the College so that they can begin their Lycoming experience under the most favorable circumstances. Students sit for placement tests, confer with their academic advisors, preregister for fall classes, and become acquainted with their classmates.

First Weekend — Begins the day freshmen arrive with New Student Convocation. The weekend activities include academic success, career, library and financial aid workshops along with social events.

Information and Support — Students and their families find the Office of the Assistant Dean for Freshmen an accessible resource to resolving problems, developing solutions, coordinating services and enabling student success. Student and Family newsletters are provided during the year.

Office of the Assistant Dean for Sophomores

The College continues to provide academic counseling and support as students move into the sophomore year. The Assistant Dean for Sophomores meets individually with second year students and, in cooperation with the Assistant Dean for Freshmen, conducts small group retreats and other meetings. These

efforts are designed to alert students to their circumstances, to help them explore options, to motivate them to achieve their academic aspirations, and to provide them with useful strategies and resources for success.

In addition, the Sophomore Dean assists Sophomore Class Officers in planning events, consults with students on a variety of personal and social concerns, surveys the Class to learn their opinions about the Freshman Year at Lycoming, and engages in a variety of other activities involving the welfare of our sophomore students.

SPECIAL ACADEMIC OPPORTUNITIES

May Term — This four-week voluntary session is designed to provide students with courses listed in the catalog and experimental and special courses that are not normally available during the fall and spring semesters and summer sessions. Some courses are offered on campus, others involve travel. In addition to the courses themselves, attractions include less formal classes and reduced tuition rates. *On campus* courses have included Chemistry in Context, Field Geology, Field Ornithology, Energy Economics, Writer's Seminar, American Detective Fiction, The American Hard-Boiled Mystery, Organized Crime in America, and Internet Marketing and Advertising. *Travel courses* have included Painting at the Outer Banks, Art History and Photography in Greece and Italy, Cross-Cultural Psychology in Greece and Italy, Intensive Language/Cultural Study and Community Service in Mexico, Tropical Marine Biology in Jamaica, and Nursing in England. A Business internship opportunity to study and work in England for six weeks is offered on a biannual basis.

Summer Sessions I and II — These two successive five-week academic terms offer the opportunity for students to complete internships, independent studies and semester courses.

Independent Studies — Independent studies are available to any qualified student who wishes to engage in and receive academic credit for any academically legitimate course of study for which he or she could not otherwise receive credit. It may be pursued at any level (introductory, intermediate, or advanced) and in any department, whether or not the student is a major in that department. An independent studies project may either duplicate a catalogue course or be completely different from any catalog course. In order for a student to be registered in any independent study course, the following conditions must be satisfied:

- 1) An appropriate member of the faculty must agree to supervise the project and must certify by signing the application form that the project involves an amount of legitimate academic work appropriate for the amount of academic credit requested and that the student in question is qualified to pursue the project.
- 2) The studies project must be approved by the chair of the department in which the studies project is to be undertaken. In the case of catalog courses, all department members must approve offering the catalog course as an independent studies course.
- 3) After the project is approved by the instructor and the chair of the appropriate department, the studies project must be approved by the Committee on Individual Studies.

Participation in independent studies projects which do not duplicate catalog courses is subject to the following:

- Students undertaking independent studies projects must have a GPA of at least 2.50.
- Students may not engage in more than one independent studies project during any given semester.
- Students may not engage in more than two independent studies projects during their academic careers at Lycoming College.

- The Individual Studies Committee may exempt members of the Lycoming College Scholar Program from these two limitations.

As with other academic policies, any other exceptions to these two rules must be approved by the Committee on Academic Standards.

Internship Program — An internship is a course jointly sponsored by the College and a public or private agency or subdivision of the College in which a student is able to earn college credit by participating in some active capacity as an assistant, aide, or apprentice. At least one-half of the effort expended by the intern should consist of academic work related to agency situations. The objectives of the internship program are:

- 1) to further the development of a central core of values, awarenesses, strategies, skills, and information through experiences outside the classroom or other campus situations, and
- 2) to facilitate the integration of theory and practice by encouraging students to relate their on-campus academic experiences more directly to society in general and to possible career and other post-baccalaureate objectives in particular.

Any junior or senior student in good academic standing may petition the Committee on Individual Studies for approval to serve as an intern. A maximum of 16 credits can be earned through internships, practica, and/or student teaching. Guidelines for program development, assignment of tasks and academic requirements, such as exams, papers, reports, grades, etc., are established in consultation with a faculty director at Lycoming and an agency supervisor at the place of internship.

Students with diverse majors have participated in a wide variety of internships, including ones with NBC Television in New York City, the Allenwood Federal Prison Camp, Pennsylvania State Department of Environmental Resources, Lycoming County

Historical Society, the American Cancer Society, business and accounting firms, law offices, hospitals, social service agencies, banks and Congressional offices.

Practica — Practica are offered in Accounting, Biology, Business, Communication, Criminal Justice, Economics, Education, IMS, and Psychology. These courses require 10 to 12 hours of work per week in a business, agency, or organization in addition to classroom time. A maximum of 16 credits can be earned through practica, internships, and/or student teaching.

Teacher Intern Program — The purpose of the Teacher Intern Program is to provide individuals who have completed a baccalaureate degree with the opportunity to become certified teachers through on-the-job training. Interns can earn a Lycoming College Teacher Education Certificate and be certified by the Commonwealth of Pennsylvania in elementary education or one or more of the following secondary areas: art, biology, chemistry, English, French, general science (with biology or astronomy/physics tracks), German, mathematics, music, physics, social studies, and Spanish.

Interested individuals should file a formal application with the Education Department for admission to the Intern Program. Upon completion of the application process, interns receive a letter of Intern Candidacy from the Pennsylvania Department of Education which the candidate then uses to apply for a teaching position. Necessary professional coursework can be completed prior to the teaching experience when individuals obtain teaching position. (See Education Department on page 96 for course listing.)

The Philadelphia Urban Semester — A full semester liberal arts program for professional development and field study is available to Lycoming students. The program is open to juniors majoring in any discipline or program.

The Philadelphia Urban Semester is sponsored and administered by the Great Lakes Colleges Association.

Washington Semester — With the consent of the Department of Political Science and the Registrar, selected students are permitted to study in Washington, D.C., at The American University for one semester. They may choose from seven different programs: Washington Semester, Urban Semester, Foreign Policy Semester, International Development Semester, Economic Policy Semester, Science and Technology Semester, or American Studies Semester.

United Nations Semester — With the consent of either the Department of History or Political Science and the Registrar, selected students may enroll at Drew University in Madison, New Jersey, in the United Nations Semester, which is designed to provide a first-hand acquaintance with the world organization. Students with special interests in world history, international relations, law, and politics are eligible to participate.

Capitol Semester Internship Program — This program is available to eligible students on a competitive basis. The program is co-sponsored by Pennsylvania's Office of Administration and Department of Education. Paid internships are available to students in most majors. Interested students should contact the Career Development Center for additional information.

STUDY ABROAD PROGRAMS

Students are encouraged to participate in a variety of study abroad programs sponsored by affiliates or other institutions. Students who intend to study abroad must have a cumulative grade point average of 2.50 or higher. Study abroad opportunities range from summer sessions to a full semester or aca-

demic year overseas. All overseas programs require prior approval from the students' major departments, the Study Abroad Coordinator, and the Registrar. Applications are available in the Office of the Registrar.

Before embarking on an overseas learning experience, students should review the study abroad materials in the Career Development Center (2nd floor, Wertz Center). With the help of the Study Abroad Coordinator, they must identify any additional program requirements such as fluency in a foreign language.

A limited number of competitive grants for study abroad at our affiliate institutions are available. Application forms are posted on the College's home page under Academic Programs, Study Abroad. For more details, contact the Study Abroad Coordinator. Lycoming aid is not part of the Study Abroad package.

Affiliate Programs — Lycoming has cooperative arrangements with six institutions overseas: Anglia Polytechnic University (Cambridge, England), CUEF Université Stendhal-Grenoble 3 (Grenoble, France), Lancaster University (Lake District, England), Oxford Brookes University (Oxford, England) Regent's College (London, England), and Tandem Escuela Internacional (Madrid, Spain). Course offerings vary at each institution, contact the Study Abroad Coordinator for details. Students interested in the programs Grenoble and at Tandem should contact the Department of Foreign Languages and Literatures.

Programs Sponsored by Other Institutions — Lycoming students have taken advantage of opportunities offered by other institutions in countries such as Australia, the Czech Republic, France, Germany, Ireland, Mexico, New Zealand, Spain, and Sweden. Information regarding these and other programs are available in the Career Development Center, the Department of Foreign Languages and



CURRICULUM

Numbers 100-149 Introductory courses and Freshman level courses

Numbers 200-249 Intermediate courses and Sophomore level courses

Numbers 300-349 Intermediate courses and Junior level courses

Numbers 400-449 Advanced courses and Senior level courses

Numbers N50-N59* Non-catalog courses offered on a limited basis

Numbers 160-169 Applied Music, Theatre Practicums and other fractional credit courses

Numbers 470-479 Internships

Numbers N80-N89* Independent Study

Numbers 490-491 Independent Study for Departmental Honors

*N = course level 1, 2, 3 or 4 as determined by department

Courses not in sequence are listed separately, as:

Drawing ART 111

Color Theory ART 212

Courses which imply a sequence are indicated with a dash between, meaning that the first semester must be taken prior to the second, as:

Intermediate French

FRN 111-112

Except for academic reasons, all students have the right of access to all courses.

Literatures, and from the Study Abroad Coordinator.

Student Teaching Abroad — Lycoming College has established a cooperative program with Moorhead State University enabling teacher education students to do all or part of their student teaching in a foreign country.

This program offers exceptional students the opportunity to student teach in nearly any country in the world. Students are placed in independent international schools where English is the instructional language. An effort is made to assign students to geographical areas that will enrich their backgrounds, serve their special interests and expand their cultural horizons.

NOTE: Lycoming College cannot assume responsibility for the health, safety, or welfare of students engaged in or en route to or from any off-campus studies or activities which are not under its exclusive jurisdiction.

ACCOUNTING (ACCT)

Associate Professor: Kuhns

Assistant Professors: Slocum,

Wienecke (Chairperson)

The purpose of the accounting major is to help prepare the student for a career within the accounting profession. In order to satisfy the needs of an extremely diverse profession, the major in accounting consists of three separate tracks. Track I is designed for students with an interest in accounting for the informational needs of managers including business entities, non-profit entities and internal auditing.

This track will provide excellent preparation for the Certified Management Accounting (CMA) exam. Track II is a 128 semester hour program and is designed to meet the requirements of the Pennsylvania State Board of Accountancy for those students whose goal is to become Certified Public Accountants in Pennsylvania. Track III is a 150 semester hour program designed to meet the 150 hour requirement of the American Institute of Certified Public Accounts for those students whose goal is to become a member of the AICPA in Pennsylvania or any other state.

Students planning to sit for the Uniform Certified Public Accounting Examination are advised to check with their State Board of Accounting to assure that they have completed all courses required for C.P.A. licensure.

Core courses required of all majors:

ACCT 110, 223, 344, 440, 443; BUS 223, 228, 244, 312, 320, 338, 441; ECON 110 or 111; MATH 123

Track requirements:

I. Management Accounting - 128 hours:

ACCT 224, 444, and either 449 or 470-479; BUS 339

II. Financial Accounting - 128 hours:

ACCT 345, 436, 441; one course from ACCT 224, 442, and either 449 or 470-479, or BUS 345



III. Financial Accounting - 150 hours:

ACCT 224, 345, 436, 441, 442, 447, and either 449 or 470-479; BUS 235, 236; ECON 110 and 111; one course from SOC or PSY

The following courses have been approved to be offered as writing intensive courses and may be offered as such: ACCT 223, 224, 442. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in the Department of Accounting consists of ACCT 110 and four other accounting courses as determined by the student's interests.

100**PERSONAL FINANCIAL PLANNING**

This course prepares students to make better informed financial decisions in a complicated world. A practical, relatively non-technical course designed to help the student identify and plan to meet their financial goals.

110**ELEMENTARY ACCOUNTING THEORY**

An introductory course in recording, classifying, summarizing, and interpreting the basic business transaction. Problems of classification and interpretation of accounts and preparation of financial statements are studied.

130**ACCOUNTING FOR MANAGERIAL DECISION-MAKING**

An introduction to the various components of managerial accounting. Emphasis is placed on managerial problem-solving techniques and the analysis of the results. Accounting systems, costing procedures, cost-volume profit relationships, managerial control processes and the use of computers as aids to decision-making are studied. Students will gain hands-on experience with various computer applications of managerial accounting. *Prerequisite: ACCT 110.*

223**COST AND BUDGETARY ACCOUNTING THEORY I**

Methods of accounting for material, labor and factory overhead expenses consumed in manufacturing using job order, process, and standard costing techniques. *Prerequisite: ACCT 110.*

224**COST AND BUDGETARY ACCOUNTING THEORY II**

Application of cost accounting and budgetary theory to decision making in the area of make or buy, expansion of production and sales, break even analysis, decision modeling,

internal control and information systems. *Prerequisite: ACCT 223 and MATH 123.*

344**INTERMEDIATE ACCOUNTING THEORY I**

An in-depth examination of the environment within which financial accounting theory exists. An examination of the basic postulates that underlie financial statements and a critique of what financial reporting means. *Prerequisite: ACCT 223 or consent of instructor.*

345**INTERMEDIATE ACCOUNTING THEORY II**

An examination of the various accounting and reporting issues affecting assets. *Prerequisite: ACCT 344.*

436**INTERMEDIATE ACCOUNTING THEORY III**

An examination of the various accounting and reporting issues affecting liabilities, stockholder equity, earnings per share, cash flows and accounting changes. *Prerequisite: ACCT 345.*

440**AUDITING THEORY**

A study of the science or art of verifying, analyzing, and interpreting accounts and reports. The goal of the course is to emphasize concepts which will enable students to understand the philosophy and environment of auditing. Special attention is given to the public accounting profession, studying auditing standards, professional ethics, the legal liability inherent in the attest function, the study and evaluation of internal control, the nature of evidence, the growing use of statistical sampling, the impact of electronic data processing, and the basic approach to planning an audit. Finally, various audit reports expressing independent expert

opinions on the fairness of financial statements are studied. *Prerequisite: ACCT 344, MATH 123, and BUS 320.*

441**FEDERAL INCOME TAX**

Analysis of the provisions of the Internal Revenue Code relating to income, deductions, inventories, and accounting methods. Practical problems involving determination of income and deductions, capital gains and losses, computation and payment of taxes through withholding at the source and through declaration are considered. Planning transactions so that a minimum amount of tax will result is emphasized. *Prerequisite: ACCT 110 or consent of instructor.*

442**FEDERAL INCOME TAX
ADMINISTRATION AND PLANNING**

An analysis of the provisions of the Internal Revenue Code relating to partnerships, estates, trusts, and corporations. An extensive series of problems is considered, and effective tax planning is emphasized. *Prerequisite: ACCT 110, or consent of instructor.*

443**ACCOUNTING FOR BUSINESS
COMBINATIONS**

Certain areas of advanced accounting theory, including business combinations and consolidated financial statements. *Prerequisite: ACCT 345. One-half unit of credit.*

444**CONTROLLERSHIP**

Control process in the organization. General systems theory, financial control systems, centralization-decentralization, performance measurement and evaluation, forecasts and budgets, and marketing, production and finance models for control purposes. *Prerequisite: ACCT 224 or consent of instructor.*

447**ADVANCED ACCOUNTING**

An intensive study of partnerships, installment and consignment sales, branch accounting, foreign currency transactions, and segment interim reporting. *Prerequisite: ACCT 443. One-half unit of credit.*

449**PRACTICUM IN ACCOUNTING**

An introduction to the real world of accounting. Students are placed in Managerial and Public Accounting positions in order to effect a synthesis of the students' academic course work and its practical applications. Specifics of the course work to be worked out in conjunction with department, student and sponsor. *May be repeated for credit with consent of instructor.*

470-479**INTERNSHIP (See index)**

Interns in accounting typically work off campus under the supervision of a public or private accountant.

N80-N89**INDEPENDENT STUDY (See index)**

Typical examples of recent studies in accounting are: computer program to generate financial statements, educational core for public accountants, inventory control, and church taxation.

490-491**INDEPENDENT STUDY FOR
DEPARTMENTAL HONORS (See index)**



ACCOUNTING - MATHEMATICAL SCIENCES

Associate Professor: Kuhns (Coordinator)

The accounting-mathematical sciences interdisciplinary major is designed to offer, within a liberal arts framework, courses which will aid in constructing mathematical models for business decision-making. Students obtain the necessary substantial background in both mathematical sciences and accounting.

Required accounting courses are: ACCT 110, 223, 224, 344, 345, 441, 442. In mathematical sciences, required courses are: CPTR 125, 321 and MATH 112, 128, 129, 338 and either 123 or 332. Recommended courses include: MATH 130, 238, 333; BUS 223, 235, 236, 338, 339; CPTR 108, 246; ECON 110, 111; PSY 224, 225; and SOC 110.

ACTUARIAL MATHEMATICS

Associate Professor: Sprechini (Coordinator)

The Actuarial Mathematics major is designed to offer, within a liberal arts framework, coursework to prepare for an actuarial career. Students obtain the necessary mathematical background for the first actuarial exam and two or three exams beyond the first one. Students also obtain some background in accounting, economics, and business which is needed for an actuarial career. At the time of completion of all major requirements, or shortly thereafter, a student should be prepared to sit for up to four of the examinations of the Society of Actuaries.

The Actuarial Mathematics major consists of 14 unit courses and two semesters of non-credit colloquia. In Mathematical Sciences, required courses are CPTR 125, MATH 128, 129, 130, 234, 238, 321, 332, 333, and 338. Also required are ACCT 110; ECON 110; one of MATH 214 or ECON 230; one of ACCT 130, ACCT 441, BUS 338, ECON 331 or 441; two semesters of MATH 339 or 449 taken during the junior and/or senior years; successful completion of any one of the Society of Actuaries Examinations (typically either the course 100 or course 110 Examinations) by the end of the junior year.

Recommended courses include: ACCT 223, 224, 226, 344; BUS 339, 342; CPTR 108; ECON 220, 229, 332, 337; MATH 106, 231, 432, 434. It is also strongly recommended that the student complete as many of the actuarial examinations as possible prior to graduation.



AMERICAN STUDIES (AMST)

Professor: Piper (Coordinator)

The American Studies major offers a comprehensive program in American civilization which introduces students to the complexities underlying the development of America and its contemporary life. Thirteen courses are included.

Four Course Requirements

The primary integrating units of the major, these courses—some team-taught—will encourage students to consider ideas from different points of view and help them to correlate information and methods from various disciplines:

1. AMST 200 — America as a Civilization
(First semester of major study)
2. AMST 220 — American Tradition in the Arts and Literature
3. HIST 449 or SOC 447 — Research and Methodology (junior or senior year)
4. Internship or Independent Study (junior or senior year)

Concentration Areas

Six courses in one option and three in the other are needed. Six primary concentration-option courses in American Arts or American Society build around the insights gained in the core courses. They focus particular attention on areas most germane to academic and vocational interests. The three additional courses from the other option give further

breadth to an understanding of America. Students also will be encouraged to take elective courses relating to other cultures.

Students should design their American Studies major in consultation with the program coordinator.

American Arts Concentration Option

- ART 332 — American Art of the 20th Century
- ENGL 222 — American Literature I
- ENGL 223 — American Literature II
- MUS 128 — American Music
- MUS N 80 — Studies in American Music
- THEA N 80 — Studies in American Theatre

American Society Concentration Option

- ECON 224 — Urban Problems
- HIST 442 — U.S. Social and Intellectual History to 1877
- HIST 443 — U.S. Social and Intellectual History since 1877
- PSCI331 — Civil Rights and Liberties
- PSCI 335 — Law and Society
- SOC 334 — Racial and Cultural Minorities
- Students interested in teacher certification should refer to the Department of Education on page 95.

200

AMERICA AS A CIVILIZATION

An analysis of the historical, sociocultural, economic, and political perspectives of American civilization with special attention to the interrelationships between these various orientations. May be taken for either one-half unit (Section 200A) or full unit (Section B); declared majors and prospective majors should take the full-unit course, 200B. *Alternate years.*

220

AMERICAN TRADITION IN THE ARTS AND LITERATURE

The relationship of the arts and literature to the various historical periods of American life.

470-479	INTERNSHIP
N80-N89	INDEPENDENT STUDY
490-491	INDEPENDENT STUDY FOR DEPARTMENTAL HONORS



ARCHAEOLOGY AND CULTURE OF THE ANCIENT NEAR EAST

Instructor: Knauth (Coordinator)

The Archaeology and Culture of the Ancient Near East interdisciplinary major is designed to acquaint students with the “cradle of Western civilization.” The major requires completion of ten courses relevant to the study of the ancient Mediterranean and Near Eastern worlds from the following courses, which are described in their departmental sections:

1. Two courses in archaeology from:

REL 226 Biblical Archaeology

Plus one additional course in archaeology from:

REL 401 Field Archaeology (based on an excavation trip or internship)

REL N80-89 Independent Study project in archaeology

2. Four courses in culture from:

ART 222	Survey of Art: Ancient, Medieval, and Non-Western Art
HIST 210	Ancient History
REL 113	Old Testament Faith and History
REL 224	Judaism and Islam
REL 228	History and Culture of the Ancient Near East

3. Two semesters of foreign language from:

HEBR 101-102 Old Testament Grammar and Readings

GRK 101-102 New Testament Grammar and Readings

(Modern Hebrew, Arabic, Classical Greek or Latin may be substituted)

4. Two courses in related departments, subject to advance approval by the supervisory committee. These courses may be taken from the fields of anthropology, art, economics, geology, history, literature, philosophy, political science or religion (or other related fields); they can be taken as independent study projects. Topics should be relevant to some aspect of ancient or modern Near Eastern or Greco-Roman study.



ART (ART)

Professors: Bogle, Shipley,

Associate Professors: Golahny,
Estomin (Chairperson)

Visiting Assistant Professor: Goodyear

Part-time Instructor: Sterngold

The Art Department offers two majors in the B.A. Degree—Studio Art and Art History.

THE B.A. DEGREE - STUDIO ART

To complete a Bachelor of Arts Degree with a major in studio art, students must complete the seven-course foundation program and the requirements for an area of specialization, successfully complete each semester's colloquium (while a declared major), and successfully complete the senior exhibition. *Exception to participation in the colloquium may be made by the art faculty.*

Placement into ART 227, Introduction to Photography, will be based on the experience of the student and determined by the faculty of

the Art Department. Students who place out of ART 227 will take ART 337, Photography II, to fulfill the foundation requirement in photography. In addition, students placed into ART 337 who are specializing in Track IV, Commercial Design, will be required to take both ART 344, Computer Graphics for Electronic Media, and ART 430, Interactive Multi-Media and Web Design. Students specializing in Track VI, Photography/Electronic Art, will be required to take ART 344, Computer Graphics for Electronic Media; ART 431, Advanced Digital Imaging; or an approved independent study.

Foundation Program

ART 111 — Drawing I

ART 115 — Two-Dimensional Design

ART 116 — Figure Modeling

ART 212 — Color Theory

ART 222 — Survey of Art: Ancient Medieval and Non-Western Art

ART 223 — Survey of Art: Ancient, Medieval, and Non-Western Art

ART 227 — Introduction to Photography

ART 148, 248, 348, 448 — Art Colloquium

Areas of Specialization

I. Painting

ART 220 — Painting I

ART 221 — Drawing II

ART 330 — Painting II

ART 446 — Studio Research

and two art history courses numbered 300 or above.

II. Printmaking

ART 221 — Drawing II

ART 228 — Printmaking I

ART 338 — Printmaking II

ART 446 — Studio Research

and two art history courses numbered 300 or above.

III. Sculpture

ART 225 — Sculpture I
 ART 226 — Figure Modeling II
 ART 335 — Sculpture II
 ART 446 — Studio Research
 and two art history courses numbered 300 or above.

IV. Commercial Design

ART 221 — Drawing II
 ART 337 — Photography II
 ART 343 — Computer Graphics for Print Media
 ART 344 — Computer Graphics for Electronic Media, OR
 ART 430 — Interactive Multi-Media and Web Design. (Commercial Design majors are strongly encouraged to take both.)
 ART 442 — Special Projects with Commercial Design
 ART 470 — Internship

A student is encouraged to take the following courses: ART 431, Advanced Digital Imaging; BUS 332, Advertising; BUS 344, Electronic Commerce and Internet Marketing; COMM 323, Feature Writing for Special Audiences; COMM 110, Principles of Communication; and PSY 224, Social Psychology.

V. Generalist Art Major

To be taken by those students who are seeking teaching certification in Art. In addition, this area of specialization is recommended for those students also majoring or minoring in Psychology with a possible future career in art therapy.

ART 119 — Ceramics I
 ART 220 — Painting I
 ART 225 — Sculpture I
 ART 228 — Printmaking I
 and two art history courses numbered 300 or higher.

Students planning to complete the K-12 art certification program must also fulfill the following requirements:

ART 310 — History and Practice of Art Education

EDUC 200 — Introduction to the Study of Education
 PSY 138 — Educational Psychology
 EDUC 446, 447 448 and 449
 Professional Semester

Students are also encouraged to take EDUC 232, 239, and ART 343.

VI. Photography/Electronic Art

ART 337 — Photography II
 ART 342 — Photography III
 ART 343 — Computer Graphics for Print Media
 ART 431 — Advanced Digital Imaging, OR
 ART 446 — Studio Research
 and two Art History courses numbered 300 or above.

Students are also encouraged to take ART 344, Computer Graphics for Electronic Media, and ART 430, Interactive Multi-Media and Web Design.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: ART 222, 223, 331, 333, 334, 336, and 339. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

THE B.A. DEGREE - ART HISTORY

To complete a Bachelor of Arts degree with a major in art history, a student must take courses in art history, studio art, and history and/or religion. A student majoring in art history is advised to take a foreign language. Art History majors (once declared) are required to participate in each semester's art colloquium.

Required of all students:

ART 222 — Survey of Art: Ancient, Medieval, and Non-Western Art
 ART 223 — Survey of Art: From the Renaissance through the Modern Age

ART 447 — Art History Research
 ART 148, 248, 348, 448 — Art Colloquium

Choose four of the following:

ART 310 — History/Practice Art Education
 ART 331 — 20th Century European Art
 ART 332 — American Art of the 20th Century
 ART 333 — 19th Century European and American Art
 ART 334 — Art of the Renaissance
 ART 336 — Art of the Baroque
 ART 339 — Women in Art

Choose two of the following:

ART 111 — Drawing I
 ART 115 — Two-Dimensional Design
 ART 116 — Figure Modeling I
 ART 227 — Introduction to Photography

Two Additional Courses Outside the Art Department:

Students must take at least two additional courses in the areas of History, Literature, Theater or Religion. Students should select these courses with their advisors.

The following courses have been approved to be offered as cultural diversity courses:
 ART 222, 339. Students must check semester class schedules to determine which courses are offered as "D" courses for that semester.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: ART 222, 223, 331, 333, 334, 336 and 339. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minors

Five minors are offered by the Art Department. Requirements for each follow: Commercial Design: ART 111, 115, 212, 223, 227 and 343; Painting: ART 111, 115, 220, 330 and 221 or 223; Photography: ART 111, 212, 223, 227, 337 and 342; Sculpture: ART 116, 225, 226, 335, and 111, 119 or 445; Art History: ART 222, 223 and two advanced art history courses. Art majors who minor in art history

must take two additional upper level courses beyond the two required for the minor intended for students who major in other disciplines (i.e., ART 222, 223 and four upper level courses).

111

DRAWING I

Study of the human figure with gesture and proportion stressed. Student is made familiar with different drawing techniques and media. Some drawings from nature.

115

TWO-DIMENSIONAL DESIGN

The basic fundamentals found in the two-dimensional arts: line, shape, form, space, color, and composition are taught in relationship to the other two-dimensional arts. Perceptual theories and their relationships to what and why we see what we see in art are discussed with each problem.

116

FIGURE MODELING I

Understanding the figure will be approached through learning the basic structures and proportions of the figure. The course is conceived as a three-dimensional drawing class. At least one figure will be cast by each student.

119

CERAMICS I

Emphasis placed on pottery design as it relates to function of vessels and the design parameters imposed by the characteristics of clay. The techniques of ceramics are taught to encourage expression rather than to dispense merely a technical body of information.

212

COLOR THEORY

A study of the physical and emotional aspects of color. Emphasis will be placed on the study of color as an aesthetic agent for the artist. The color theories of Johannes Itten will form the base for this course with some study of the theories of Albert Munsell, Faber Birren, and Wilhelm Ostwald.

220**PAINTING I**

An introduction of painting techniques and materials. Coordination of color, value, and design within the painting is taught. Some painting from the figure. No limitations as to painting media, subject matter, or style.

Prerequisite: ART 115 or consent of instructor.

221**DRAWING II**

Continued study of the human figure. Emphasis is placed on realism and figure-ground coordination with the use of value and design. *Prerequisite: ART 111.*

222**SURVEY OF ART: ANCIENT, MEDIEVAL, AND NON-WESTERN ART**

A survey of the major developments in the visual arts of the Ancient, Medieval, and Non-western fields. Emphasis is on the interrelation of form and content, the function and meaning of the visual arts within their respective cultures, and the importance of visual literacy.

223**SURVEY OF ART: FROM THE RENAISSANCE THROUGH THE MODERN AGE**

A survey of Western architecture, sculpture, and painting. Emphasis is on the interrelation of form and content and on the relatedness of the visual arts to their cultural environment: 14th-20th centuries.

225**SCULPTURE I**

An introduction to the techniques, materials, and ideas of sculpture. Clay, plaster, wax, wood, and other materials will be used. The course will be concerned with ideas about sculpture as expression, and with giving material form to ideas.

226**FIGURE MODELING II**

Will exploit the structures and understandings learned in Figure Modeling I to produce larger, more complex figurative works. There will be a requirement to cast one of the works in plaster. *Prerequisite: ART 116 and consent of instructor.*

227**INTRODUCTION TO PHOTOGRAPHY**

Objectives of the course are to develop technical skills in the use of photographic equipment (cameras, films, darkroom, printmaker) and to develop sensitivity in the areas of composition, form, light, picture quality, etc. Each student must own (or have access to) a 35mm camera capable of full-manual operation.

228**PRINTMAKING I**

Introduction to the techniques of silkscreen, intaglio, monotype and lithography printing. One edition of at least six prints must be completed in each area. *Prerequisite: ART 111 or 115; or consent of instructor.*

229**CERAMICS II**

Continuation of Ceramics I. Emphasis on use of the wheel and technical aspects such as glaze making and kiln firing. *Prerequisite: ART 119.*

310**HISTORY AND PRACTICE OF ART EDUCATION**

This course concerns the teaching of art, from the distant past to the present. Topics include Discipline-Based Art Education: its philosophy, history, and context; lesson planning; and teaching methods. Course work includes observation of art classes in elementary and secondary schools in the greater Williamsport area. *Required of art majors in the K-12 certification program.*

30**PAINTING II**

Continuation of Painting I (ART 220). Emphasis is placed on individual style and technique. Artists and movements in art are studied. No limitations as to painting media, subject matter, or style. *Prerequisite: ART 220.*

31**20TH CENTURY EUROPEAN AND AMERICAN ART**

Developments in European and American art from about 1880 to the present, including Cubism, Dada, Surrealism, Abstraction, Abstract Expressionism, Photorealism, and Post-Modernism.

33**19TH CENTURY EUROPEAN AND AMERICAN ART**

The art of Western Europe and the United States from 1780-1900, with emphasis on painting in France. Those artists to be studied include David, Goya, Delacroix, Courbet, the Impressionists, Turner, Homer, Cole and Eakins.

34**ART OF THE RENAISSANCE**

The art of Italy and Northern Europe from 1300 to 1530, with emphasis on the painters Giotto, Masaccio, Leonardo da Vinci, Raphael, Titian, Van Eyck, and Durer, the sculptors Ghiberti, Donatello and Michelangelo, and the architects Brunelleschi and Alberti.

35**CULPTURE II**

A continuation of Sculpture I (Art 225). Emphasis is on advanced technical process. Casting of bronze and aluminum sculpture will be done in the school foundry. *Prerequisite: ART 225.*

36**ART OF THE BAROQUE**

Seventeenth-century painting and sculpture in Italy and The Netherlands with emphasis on Bernini, Poussin, Rubens, and Rembrandt, with

special attention given to the expressive, narrative, and painterly styles present in their art.

337**PHOTOGRAPHY II**

To extend the skills developed in Introduction to Photography (ART 227) by continued growth in technical expertise including instruction in photo art processes such as collage, multiple images, hand-coloring and/or toning. Emphasis is placed on conceptual and aesthetic aspects of photography. *Prerequisite: ART 227.*

338**PRINTMAKING II**

Continuation of Printmaking I (ART 228). Emphasis on multi-plate and viscosity printing. *Prerequisite: ART 228.*

339**WOMEN IN ART**

A survey of women artists from a variety of viewpoints — aesthetic, historical, social, political and economic — which seeks to understand and integrate the contributions of women artists into the mainstream of the history of art.

342**PHOTOGRAPHY III**

Study of techniques and aesthetics of color photography using color negatives and/or slides, advanced imaging techniques utilizing the computer to enhance and manipulate students' original photographs, and introduction to large format view cameras. Integration of tools to students' own artistic process emphasized. A portfolio including examples of color, image processing and large format work will be produced. *Prerequisites: ART 227, 337, and 343.*

343**COMPUTER GRAPHICS FOR PRINT MEDIA**

Use of computers as an artist's and designer's tool. Concentrated, hands-on study of image manipulation, illustration and layout

programs. Content of course includes fundamentals of vector and raster imaging, typography, design, layout, color separation, and manipulating computer images obtained from scanners, video sources, and the students' own original production using computer paint software. *Prerequisite: ART 227 and either ART 111 or 115; or consent of instructor.*

344**COMPUTER GRAPHICS
FOR ELECTRONIC MEDIA**

Use of the computer as a tool to create, manipulate and edit video for artistic and commercial purposes. Content of course includes computer animation, multi-media program production and computer interfaced video production. *Prerequisite: ART 343 or consent of instructor.*

430**INTERACTIVE MULTI-MEDIA
AND WEB DESIGN**

This course is a concentrated, hands-on study of interactive media for CD-ROM and the World Wide Web. It includes study of the history and design principles of interactive art, creation of 2-D computer animation, digital sound editing, Web design and CD-ROM production. *Prerequisite: ART 343 or consent of instructor.*

431**ADVANCED DIGITAL IMAGING**

This course continues the study of the computer as an artist and designer's tool. It is the capstone course for those Photography/Electronic Media majors who wish to do the majority of their senior show work in the digital media. Students learn advanced imaging techniques, work with digital cameras, use scanners as "cameras," combine traditional and digital photography, and experiment with a variety of printing processes and substrates. *Prerequisite: ART 343 or consent of instructor.*

440**PAINTING III**

Advanced study of painting techniques and materials. A personal painting direction is expected. There is some experimentation with new painting techniques. *Prerequisite: ART 330.*

441**DRAWING III**

Continued study of the human figure, individual style, and professional control of drawing techniques and media are emphasized. *Prerequisite: ART 221*

442**SPECIAL PROJECT IN
COMMERCIAL DESIGN**

Concentrated research, preparation and execution of a series of projects in commercial design utilizing computer graphics, page layout programs and paint, draw and image manipulation software that simulate traditional airbrush, water-based mediums, markers, colored pencils and ink pens. The following skills are involved: illustration, photography, design, typesetting, lettering, layout, overlays, scanning color separation, matching and proofing and preparation of files for a service bureau or printer. *Prerequisite: ART 343 or consent of instructor.*

445**SCULPTURE III**

In Sculpture III the student is expected to produce a series of sculptures that follow a conceptual and technical line of development. *Prerequisite: ART 116, 225, and 335.*

446**STUDIO RESEARCH**

Independent research in an elective studio area, conducted under the supervision of the appropriate faculty member, includes creation of work which may be incorporated in the senior group exhibition. Student works in private studio assigned by the department.

47**ART HISTORY RESEARCH**

Independent research, conducted under the supervision of the appropriate faculty member, includes the research and writing of a thesis, to be presented to a committee of Art department faculty. *This course may be repeated for credit.*

48, 248, 348 and 448**ART COLLOQUIUM**

A non-credit seminar in which faculty, students and invited professionals discuss and critique specific art projects. *Required of all students majoring in art. Taken each semester. Meets 2-4 times each semester. Pass/Fail on-credit seminar.*

49**ART PRACTICUM**

This course offers students internship experience in commercial design or commercial photography with companies and organizations. Students work at least 10 hours per week for a sponsoring company and attend seminar sessions on issues relevant to their work assignments. Students must apply directly to the Art Department to arrange job placement before pre-registration to be eligible for this course. *Prerequisite: ART 442 or consent of instructor.*

70-479**INTERNSHIP (See index)**

Recent studies in anatomy. Aspects of the art nouveau, lithography, photography, pottery, problems in illustration, and watercolor.

90-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

ASTRONOMY AND PHYSICS

Associate Professors: Erickson (Chairperson), Fisher, Wolfe

The department offers two majors. The major in astronomy is specifically designed to train students in the field of planetarium education; it also may serve as a basis for earning state certification as a secondary school teacher of general science. The major in physics can prepare students for graduate work in physics, astronomy, and related physical sciences, for the cooperative program in engineering, for state certification as secondary school teachers of physics, or for technical positions in industry.

ASTRONOMY (ASTR)

The major in astronomy requires courses in astronomy, physics, chemistry and mathematics. The required courses are ASTR 111, 448, and five additional courses numbered ASTR 112 or higher four of which must be numbered ASTR 230 or higher; PHYS 225-226; CHEM 110-111 or 330-331; and MATH 128-129. Astronomy majors are also required to register for four semesters of ASTR 349 and 449 (non-credit colloquia).

The requirement for taking ASTR 448 can be satisfied by doing an individual studies or honors project where the results would be presented at a departmental colloquium. A double major in astronomy and physics need only take the course once. Students participating in an engineering 3-2 program will be exempt from taking ASTR 448.

The following courses are recommended:
PHIL 223 and 333, PHYS 333, and ART 227.

Students interested in teacher certification should refer to the Department of Education on page 95.

The following course has been approved to be offered as a writing intensive course and may be offered as such: ASTR 230. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in astronomy consists of a grade of C or better in both ASTR 111 and PHYS 225 plus any three additional courses selected from PHYS 226 or ASTR courses numbered 200 or higher.

104

FIELD GEOLOGY

A methods course introducing the field techniques needed to study the geology of an area. *May or summer term only.*

107

OBSERVATIONAL ASTRONOMY

A methods course providing the opportunity to make a variety of astronomical observations, both visually and photographically, with and without telescopes. The planetarium is used to familiarize the student with the sky at various times during the year and from different locations on earth. *May or summer term only.*

101

PRINCIPLES OF ASTRONOMY

111

PRINCIPLES OF ASTRONOMY

A summary of current concepts of the universe from the solar system to distant galaxies. Describes the techniques and instruments used in astronomical research. Presents not only what is reasonably well known about the universe, but also considers some of the major unsolved problems. *ASTR 101 and 111 share the same three hours of lecture and two hours of laboratory each week.*

ASTR 111 has one additional hour each week for more advanced mathematical treatment of the material. Credit may not be earned for both 101 and 111. Corequisite for 111: MATH 127 or consent of instructor.

102

PRINCIPLES OF GEOLOGY

112

PRINCIPLES OF GEOLOGY

A study of the surface processes and internal structure of the planet Earth. Shows how past events and lifeforms can be reconstructed from preserved evidence to reveal the geologic history of our planet from its origin to the present. Describes the ways geology influences our environment. *ASTR 102 and 112 share the same three hours of lecture and two hours of laboratory each week. 112 has one additional hour each week for more advanced mathematical treatment of the material. Credit may not be earned for both 102 and 112. Corequisite for 112: MATH 127 or consent of instructor. Alternate years.*

114

MANNED SPACE FLIGHT I

Traces the beginnings of rocketry and spaceflight capability from Sputnik (1957) through the conclusion of the Apollo moon landings (1972). Extensive use of NASA video and other audio-visual aids. Examination of scientific, engineering and political motivations. *When taken in May term, must be scheduled with ASTR 115. Not for distribution. Alternate years. One-half unit of credit.*

115

MANNED SPACE FLIGHT II

Examines manned spaceflight from Skylab missions (1973-74) through Apollo-Soyuz Test Project, early Space Shuttle missions, to current U.S. and Soviet space efforts. Extensive use of NASA video. Examination of scientific, engineering, and political motivations. *When taken in May Term, must be scheduled with AST 114. Not for distribution. Alternate years. One half unit of credit.*

**230
PLANETARIUM TECHNIQUES**

A methods course covering major aspects of planetarium programming, operation and maintenance. Students are required to prepare and present a planetarium show. Upon successfully completing the course, students are eligible to become planetarium assistants. *Three hours of lecture and demonstration and three hours of practical training per week.*
Prerequisite: a grade of C or better in ASTR 101 or 111. Alternate years.

**243
PLANETARY SCIENCE**

A comparative survey of the various classes of natural objects that orbit the sun, including the major planets, their satellites, the minor planets, and comets. Topics include meteorological processes in atmospheres, geological processes that shape surface features, internal structures, the role of spacecraft in the exploration of the solar system, and clues to the origin and dynamic evolution of the solar system. *Four hours of lecture per week.*

Prerequisites: a grade of C or better in ASTR 111 or 112, or PHYS 225. Alternate years.

**344
RELATIVITY AND COSMOLOGY**

A detailed presentation of the special theory of relativity and an introduction to the general theory. Topics include: observational and experimental tests of relativity, four-vectors, tensors, space-time curvature, alternative cosmological models, and the origin and future of the universe. *Four hours of lecture per week.*
Prerequisites: ASTR 111 and PHYS 225. Alternate years. Cross-listed as PHYS 344.

**445
STELLAR EVOLUTION**

The physical principles governing the internal structure and external appearance of stars. Mechanisms of energy generation and transport within stars. The evolution of stars from initial formation to final stages. The creation of chemical elements by nucleosynthesis. *Four hours of lecture per week.*

*Prerequisites: ASTR 111 and PHYS 226.
 Alternate years.*

**446
STELLAR DYNAMICS AND GALACTIC STRUCTURE**

The motion of objects in gravitational fields. Introduction to the n-body problem. The relation between stellar motions and the galactic potential. The large-scale structure of galaxies in general and of the Milky Way Galaxy in particular. *Four hours of lecture per week.*
Prerequisites: ASTR 111 and PHYS 225. Alternate years.

**448
RESEARCH TOPICS**

Students participate in a research project under the guidance of a faculty member in the department. In weekly meetings, they share reports from the literature and report on their own work. Topics will range from abstract theoretical to selected practical experimental investigations. *Prerequisite: Permission of the instructor. Cross-listed as PHYS 448.*

**349 & 449
ASTRONOMY AND PHYSICS COLLOQUIA**

This non-credit but required course for juniors and seniors majoring in astronomy and physics offers students a chance to meet and hear active scientists in astronomy, physics, and related scientific areas talk about their own research or professional activities. In addition, majors in astronomy and physics must present two lectures, one given during the junior year and one given during the senior year, on the results of a literature survey or their individual research. Students majoring in this department are required to attend four semesters during the junior and senior years. A letter grade will be given when the student gives a lecture. Otherwise the grade will be P/F. Students in the Cooperative Program in Liberal Arts and Engineering are required to attend two semesters and present one lecture during their junior year. Non-credit course. *One hour per week.*
Cross-listed as PHYS 349 & 449.

470-479

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

Independent studies may be undertaken in most areas of astronomy.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

PHYSICS (PHYS)

The major in physics requires courses in physics, chemistry and mathematics. The required courses are PHYS 225, 226, 331, 332, 448 and four additional courses numbered PHYS 333 or higher; CHEM 110-111 or 330-331; and MATH 128-129. Physics majors are also required to register for four semesters of PHYS 349 and 449 (non-credit colloquia).

The requirement for taking PHYS 448 can be satisfied by doing an individual studies or honors project where the results would be presented at a departmental colloquium. A double major in astronomy and physics need only take the course once. Students participating in an engineering 3-2 program will be exempt from taking PHYS 448.

Up to two courses chosen from ASTR 111, 112, 243, 445 and 446 may substitute for two of the four physics electives. The following courses are recommended: MATH 231, 238; CPTR 125 (all three required for the cooperative engineering program and by many graduate schools), and PHIL 223, 333.

Students interested in teacher certification should refer to the Department of Education on page 95.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: PHYS 338, 447. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in physics requires completion of the following courses with a C grade or better: PHYS 225-226, 331, 332, and one additional course selected from PHYS courses numbered 300 or higher.

106**ENERGY ALTERNATIVES**

A physicist's definition of work, energy, and power. The various energy sources available for use, such as fossil fuels, nuclear fission and fusion, hydro, solar, wind, and geothermal. The advantages and disadvantages of each energy-conversion method, including availability, efficiency, and environmental effects. Present areas of energy research and possible future developments. Projections of possible future energy demands. Exercises and experiments in energy collection, conversion, and utilization. *May or summer term only.*

108**GREAT IDEAS OF THE PHYSICAL UNIVERSE**

An introduction to several major concepts of physics which have developed over the past several centuries, relating them to their broad implications. The emphasis is on a descriptive rather than a mathematical discussion of topics which range from early Greek concepts of science to present day methods and techniques used to describe the physical universe. Many distinctions and similarities between science and other areas of human endeavor will be studied to demonstrate the beauty, simplicity, harmony, and grandeur of some of the basic laws which govern the universe. *Three hours of lecture and two hours of laboratory per week. Alternate years.*

225-226**FUNDAMENTALS OF PHYSICS I-II**

A mathematically rigorous introduction to physics designed for majors in physics, astronomy, chemistry and mathematics. Topics include mechanics, thermodynamics, electricity and magnetism, waves, optics, and modern

physics. Five hours of lecture and recitation and one three-hour laboratory per week. Corequisite: MATH 128 or 129. With consent of department, MATH 109 may substitute for MATH 128 or 129 as a prerequisite.

331**CLASSICAL MECHANICS**

An analytical approach to classical mechanics. Topics include: kinematics and dynamics of single particles and systems of particles, gravitation and other central forces, moving reference frames, and Lagrangian and Hamiltonian formulations of mechanics. *Four hours of lecture and three hours of laboratory per week.* Prerequisites: MATH 129 and a grade of C or better in PHYS 225.

332**ELECTROMAGNETISM**

A theoretical treatment of classical electromagnetism. Topics include: electrostatics, magnetostatics, electric and magnetic potentials, electric and magnetic properties of matter, Maxwell's equations, the electromagnetic field, and the propagation of electromagnetic radiation. *Four hours of lecture and three hours of laboratory per week.* Prerequisite: MATH 129 and a grade of C or better in PHYS 226.

333**OPTICS**

Geometrical optics, optical systems, physical optics, interference, Fraunhofer and Fresnel diffraction, and coherence and lasers will be covered. *Three hours of lecture and three hours of laboratory per week.* Prerequisites: PHYS 226 and MATH 128; or consent of instructor. Alternate years.

336**MATHEMATICAL METHODS OF PHYSICS**

Solution of ordinary linear differential equations using power series and Laplace transforms, nonlinear differential and coupled differential equations, Fourier analysis using both trigonometric and complex exponential functions, complex variables, eigenvalue

problems, infinite dimensional vector spaces, partial differential equations, boundary value problem solutions to the wave equation, heat flow equation and Laplace's equation. Prerequisites: MATH 231 and 238. Alternate years.

337**THERMODYNAMICS AND STATISTICAL MECHANICS**

Classical thermodynamics will be presented, showing that the macroscopic properties of a system can be specified without a knowledge of the microscopic properties of the constituents of the system. Then statistical mechanics will be developed, showing that these same macroscopic properties are determined by the microscopic properties. *Four hours of lecture and recitation per week.* Prerequisites: PHYS 226 and MATH 129. Alternate years.

338**MODERN PHYSICS**

Thorough investigation of changes in the classical understanding of space and time together with those of energy and matter that led to the time development of relativistic and quantum mechanical theories. Topics include: introduction to special relativity, blackbody radiation, the postulation of the photon and quantization, atomic spectra, interactions of matter and energy, Bohr model of the atom, concepts of symmetry, and development and applications of the Schrodinger equation. *Four hours of lecture and one-three hour laboratory per week.* Prerequisites: MATH 129 and a grade of C or better in PHYS 226.

339**SOLID STATE PHYSICS**

Topics include crystalline structures, periodic potentials, band structure, free electron model, semiconductor physics, electromagnetic and thermal properties of solids, superconductivity, and superfluidity. *Four hours of lecture and three hours of laboratory per week.* Prerequisites: PHYS 332 and MATH 129; or consent of instructor. Alternate years.

344**RELATIVITY AND COSMOLOGY**

A detailed presentation of the special theory of relativity and an introduction to the general theory. Topics include: observational and experimental tests of relativity, four vectors, tensors, space-time curvature, alternative cosmological models, and the origin and future of the universe. *Four hours of lecture per week.*

Prerequisites: ASTR 111 and PHYS 225.

Alternate years. Cross-listed as ASTR 344.

439**INTRODUCTION TO QUANTUM MECHANICS**

Basic concepts and formulation of quantum theory. The free particle, the simple harmonic oscillator, the hydrogen atom, and central force problems will be discussed. Both time-independent and time-dependent perturbation theory will be covered. *Four hours of lecture and recitation.*

Prerequisite: Either PHYS 226 or CHEM 331, and MATH 231. Cross-listed as CHEM 439.

447**NUCLEAR AND PARTICLE PHYSICS**

The course will consider properties of nuclei, nuclear models, radioactivity, nuclear reactions (including fission and fusion), and properties of elementary particles. The interactions of nuclear particles with matter and the detection of nuclear particles will be covered. It will be shown how observed phenomena lead to theories on the nature of fundamental interactions, how these forces act at the smallest measurable distances, and what is expected to occur at even smaller distances. *Four hours of lecture and recitation and three hours of laboratory per week.*

Prerequisites: PHYS 226, MATH 129, and either PHYS 338 or CHEM 110. Alternate years.

448**RESEARCH TOPICS**

Students participate in a research project under the guidance of a faculty member in the

department. In weekly meetings, they share reports from the literature and report on their own work. Topics will range from abstract theoretical to selected practical experimental investigations. *Prerequisite: Permission of the instructor. Cross-listed as ASTR 448.*

349 & 449**ASTRONOMY AND PHYSICS COLLOQUIA**

This non-credit but required course for juniors and seniors majoring in astronomy and physics offers students a chance to meet and hear active scientists in astronomy, physics and related scientific areas talk about their own research or professional activities. In addition, majors in astronomy and physics must present two lectures, one given during the junior year and one given during the senior year, on the results of a literature survey or their individual research. Students majoring in this department are required to attend four semesters during the junior and senior years. A letter grade will be given when the student gives a lecture. Otherwise the grade will be P/F. Students in the Cooperative Program in Liberal Arts and Engineering are required to attend two semesters and present one lecture during their junior year. Non-credit course. *One hour per week. Cross-listed as ASTR 349 & 449.*

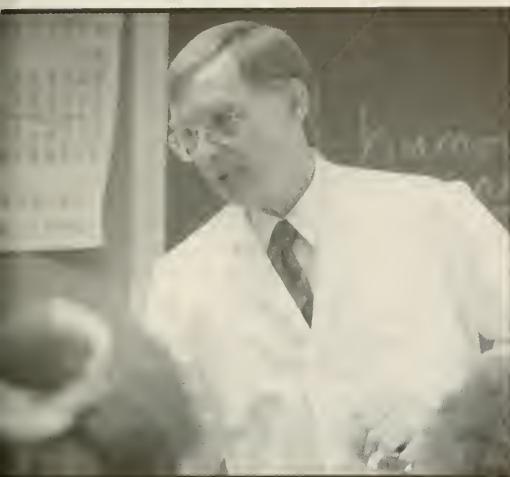
470-479**INTERNSHIP (See index)**

Interns in physics work off campus under the supervision of professional physicists employed by local industries or hospitals.

N80-N89**INDEPENDENT STUDY (See index)**

Independent studies may be undertaken in most areas of physics.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**



BIOLOGY (BIO)

Professors: Angstadt, Diehl,

Zimmerman (Chairperson)

Associate Professors: Gabriel, Zaccaria

Assistant Professors: Briggs, Newman

The Department of Biology offers both B.A. and B.S. degree programs, with minors available in Biology and Environmental Science. Consent of instructor may replace BIO 110-111 as a prerequisite for all upper level biology courses.

The B.A. Degree

To earn the B.A. degree students must complete the 13 course major which consists of BIO 110, 111, 222, 224, 225, 321, 323 and one course in Biology numbered 328 or higher (excluding BIO 400 or 470); one course from CHEM 115, 220, or 221 plus two additional units of Chemistry; two units of mathematical sciences chosen from CPTR 108, 125 and/or MATH 109, 123, 127, 128 or above. In addition, juniors and seniors are required to successfully complete BIO 349/449 (non-credit colloquium) for a maximum of four semesters and complete the capstone experiences described below. Enrollment in student teaching and/or other similar off-campus academic experiences will be accepted by the department in lieu of that semester's collo-

quium requirement. Only two courses numbered below 221 may count toward the major. Declared Biology majors may substitute BIO 106-107 for BIO 110-111 with written consent of the department chair.

The B.S. Degree

To earn the B.S. degree students must complete the 13 course major described for the B.A., meet the colloquium requirement, and pass three courses chosen in any combination from the following: BIO 328 or above (including BIO 400 and/or 470), CHEM 200 or above, PHYS 200 or above, or MATH 127 or above. Students electing to graduate with a B.S. must complete the capstone experiences listed below.

Cooperative Programs

Certain specific exceptions to the B.A. and B.S. degrees will be made for students in accelerated programs. The requirements for accelerated programs in Optometry, Forestry or Environmental Studies, Medical Technology, and Podiatry can be found in the Academic Program section of the catalog. Students interested in these programs should contact the program director before finalizing their individual programs.

Writing Intensive Courses

The following courses have been approved to be offered as writing intensive courses and may be offered as such: BIO 222, 224. Students should check semester class schedules to determine which courses are offered as "W" courses for that semester.

Capstone Experiences for Biology Majors

In order to graduate, all biology majors must demonstrate to the Department their command of biology by meeting the following three criteria.

- 1. Practical Experience:** All students must complete at least one of the experiences in the following list: Internship, Practicum, Relevant Summer Experience, Independent Studies, Honors,

Medical Technology Internship, Teaching Semester, Biology Laboratory Assistant, Biology-related volunteer work. (Summer experiences, Biology-related volunteer work, or working as a lab assistant must be approved by the Department in order to be used to meet this requirement.)

2. Research & Presentation Component:

All junior and senior majors are required to successfully complete Biology Colloquia (BIO 349 and 449) during all their semesters on campus. During their final year, students will research a biological topic and make an oral presentation at the Biology Colloquium. This will provide the student with the basic level of information literacy in the biological science.

3. Assessment:

All majors are required to take at least one of the exams listed below or pass a Biology Department Exit Exam. GRE - Bio subject exam, MCAT, OAT, DAT, VCAT, or the Praxis. By the end of their first semester of their senior year, students must provide the Department official documentation of the scores they have earned on one of these exams. If one or more of these requirements have not been met by the end of their first semester of their senior year, the student must submit a plan signed by their advisor showing when and how these requirements will be completed.

Certification in Secondary Education

A Biology major interested in becoming certified at the secondary level to teach Biology and/or General Science should, as early as possible, consult the current Department of Education Teacher Education Handbook and should make their plans known to their advisor and the Chair of the Education Department so the required courses can be scheduled before the Professional Semester.

- a) To obtain certification in Secondary Biology a student must successfully complete a Biology major, EDUC 200, PSY 138, the Pre-Student Teaching Participation, and the Professional Semester (EDUC 446, 447 and 449). Students may choose EDUC 232 and/or EDUC 239 as Education electives.
- b) Students interested in obtaining General Science/Biology certification must complete all the requirements for secondary Biology listed in (a) as well as PHYS 108 or 225 and any two courses from ASTR 111, 112 or 243. ASTR 230 is strongly recommended as an additional course.

Minors

The Department of Biology offers two minors: Biology and Environmental Science.

A minor in biology requires the completion of four courses numbered 200 or higher, with their appropriate prerequisites (i.e., two introductory biology courses). At least two of these must be from the series of courses BIO 222, 224, 225, 321, or 323.

A minor in Environmental Science consists of two introductory biology courses (one of which must be BIO 220), BIO 224, two additional courses numbered 200 or higher, one course in economics (recommended ECON 225), and ASTR 102.

Biology majors who minor in Environmental Science must complete all requirements of the biology major. In addition, they need to complete BIO 220, BIO 401, ECON 225, ASTR 112, and one course selected from either ECON 240, SOC 229, or an advanced biology course (328 or higher).

Clean Water Institute

This institute is designed to provide a forum for the natural resource heritage of North Central Pennsylvania, the Susquehanna River and its major tributaries (Pine, Loyalsock, Lycoming, and Muncy Creeks). The institute provides a service not only to Lycoming College students through coordination of Environmental internships, practica (BIO 401) and independent

study/honors projects, but also the community. This may include seminars or workshops on environmental issues as well as monitoring assistance to watershed groups.

106 CELLS, GENES AND SOCIETY

This course investigates the roles cellular phenomena, genes and biotechnology play in everyday life. The primary goal of this course is to improve recognition and understanding of the implications of biology in health care, agriculture, law, bioethics, and business.

Credit may not be earned for both BIO 106 and 110. BIO 106 is not a prerequisite for BIO 107. Three hours of lecture and one-three hour lab per week.

107 ANATOMY FOR HEALTH CARE CONSUMERS

This course is a brief survey of human anatomy and physiology, which includes study of the complementary nature of form and function, as well as study of the levels of biological organization within the body. The objective is to provide students with a background which will allow them to read, comprehend, and appreciate current articles on this subject in the popular press. Students learn the names, structure, and general functions of the major organs of the body. Animal dissection is optional. *Credit may not be earned for both BIO 106 and 111. BIO 102 is not a prerequisite to BIO 106. Three hours of lecture and one-three hour laboratory per week.*

110-111 INTRODUCTION TO BIOLOGY

An introduction to the study of biology designed for students planning to major in the biological sciences. Major topics considered include the origin of life, cellular respiration and photosynthesis, genetics, development, anatomy and physiology, ecology, behavior, and evolution. *Credit may not be earned for both BIO 106 and 110 or for both BIO 107 and 111. Three hours of lecture and one three-hour laboratory per week.*

213-214

HUMAN ANATOMY AND PHYSIOLOGY

Using the organ-systems approach, the course is an introduction to the human body — its anatomy, physiology, and normal development — with particular attention to structure and function at all levels of its biological organization (molecular through organismal). *Three hours of lecture, and one three-hour laboratory per week. Prerequisite: CHEM 115 or 220, or consent of instructor.*

220

ENVIRONMENTAL BIOLOGY

This course provides an introduction to ecological principles and concepts with an examination of the biological basis of contemporary environmental problems. The effects of human population on earth's resources are studied against a background of biological and health sciences. This course is designed primarily for students not planning to major in the biological sciences. *Three hours of lecture and one three-hour laboratory per week. Pre-requisite: BIO 110. This course is not a substitute for BIO 111 for majors.*

222

GENETICS

A general consideration of the principles governing inheritance, including treatment of classical, molecular, cytological, physiology, microbial, human, and population genetics. *Three hours of lecture and two two-hour laboratory periods per week. Prerequisite: BIO 110-111.*

224

ECOLOGY

The study of the principles of ecology with emphasis on the role of chemical, physical, and biological factors affecting the distribution and succession of plant and animal populations and communities. Included will be field studies of local habitats as well as laboratory experimentation. *Three hours of lecture and one three-hour laboratory per week. Prerequisite: BIO 110-111.*

225**PLANT SCIENCES**

A survey of the structure, development, function, classification, and use of plants and related organisms. The study will comprise four general topic areas: form, including morphology and anatomy of plants in growth and reproduction; function, concentrating on nutrition and metabolism peculiar to photosynthetic organisms; classification systems and plant identification, and human uses of plants. *Three hours of lecture and one three hour laboratory per week.* Prerequisite: BIO 110-111.

226**MICROBIOLOGY FOR THE HEALTH SCIENCES**

A study of microorganisms with emphasis given to their taxonomy and their role in various aspects of human infectious disease. Mechanisms for treating and preventing infectious diseases will be presented. Laboratory to include diagnostic culture procedures, antibiotic sensitivity testing, serology, anaerobic techniques and a study of hemolytic reactions. *Three hours of lecture and four hours of laboratory per week.* Prerequisite: One year of introductory level biology, one year of chemistry or consent of instructor. Not open to students who have received credit for BIO 321.

321**MICROBIOLOGY**

A study of microorganisms. Emphasis is given to the identification and physiology of microorganisms as well as to their role in disease, their economic importance, and industrial applications. *Three hours of lecture and two two-hour laboratory periods per week.* Prerequisite: BIO 110-111. Not open to students who have received credit for BIO 226.

323**HUMAN PHYSIOLOGY**

The mechanisms and functions of systems, including the autonomic, endocrine, digestive, cardiovascular, respiratory, renal, nervous, and reproductive systems. *Three hours of*

lecture and one three-hour laboratory per week. Prerequisite: BIO 110-111.

328**AQUATIC BIOLOGY**

A field-oriented course dealing with freshwater ecosystems. Studies will include a survey of the plankton, benthos, and fish—as well as the physical and chemical characteristics of water that influence their distribution. Several local field trips and an extended field trip to a field station will familiarize students with the diversity of habitats and techniques of limnologists. *Alternate years.* Prerequisites: BIO 110-111.

329**TROPICAL MARINE BIOLOGY**

A field-oriented course where students study the creatures of the fringing reefs, barrier reefs, lagoons, turtlegrass beds and mangrove swamps at a tropical marine laboratory. Studies will include survey of plankton, invertebrates, and fish as well as the physical and chemical characteristics that influence their distribution. Prerequisite: BIO 110-111. Alternate May terms.

333**MEDICINAL AND POISONOUS PLANTS**

An overview of plants that produce physiologically active substances that are important to humans and animals. Major themes include: Mechanisms and symptoms of poisoning, and plant chemicals with useful physiological effects. Laboratory topics include plant classification and techniques for compound identification. *Three hours of lecture and one three-hour laboratory per week.* Prerequisites: BIO 110-111, or consent of instructor. Alternate years.

334**INVERTEBRATE ZOOLOGY**

Comparative study of the invertebrate phyla with emphasis on phylogeny, physiology, morphology, and ecology. *Two three-hour lecture/laboratory periods per week.* Prerequisite: BIO 110-111. Alternate years.

338**HUMAN ANATOMY**

An upper-division elective course which uses a combined organ-system and regional approach to the study of human anatomy. The course includes lecture, laboratory and individual and/or group mini-projects.

Computer simulated dissection software packages are used extensively. Video presentations of cadaver dissections and a video disk of cross-sectional anatomy are available for study. *Prerequisites: BIO 110 and 111.*

340**PLANT ANIMAL INTERACTIONS**

An investigation of different herbivorous animals, plant defenses, and how herbivores influence plants. Topics include evolution of herbivores and plants, effects of herbivory on individuals and communities, and types of plant defenses. We will also discuss how animals deal with plant defenses, the advantages and disadvantages of monophagous and polyphagous lifestyles, different types of herbivores and herbivore damage, and mutualisms between plants and their herbivores. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110-111, or consent of instructor. Alternate years.*

341**VERTEBRATE EMBRYOLOGY**

A study of the development of vertebrates from fertilization to the fully formed fetus. Particular attention is given to the chick and human as representative organisms. *Two three-hour lecture/laboratory periods per week. Prerequisite: BIO 110-111. Alternate years.*

342**ANIMAL BEHAVIOR**

A study of causation, function, evolution, and biological significance of animal behaviors in their normal environment and social contexts. *Three hours of lecture and one four-hour laboratory each week. Prerequisite: BIO 110-111. Alternate years.*

346**VIROLOGY**

An introduction to the study of viruses. The course will cover virus anatomy and reproduction, diseases caused by viruses, modern treatments of viral infections and viral vaccines produced by recombinant DNA and other technologies. Course content will also include a description of how viruses are used as tools for genetic engineering and for studying cellular processes like membrane signal transduction, regulation of genetic expression and oncogenesis (cancer). *Four hours of lecture per week.*

Prerequisite: BIO 110-111 or consent of instructor. Alternate years.

347**IMMUNOLOGY**

The course introduces concepts concerning how pathogens cause disease and host defense mechanisms against infectious diseases. Characterization of and relationships between antigens, haptens, and antibodies are presented. Serological assays will include: agglutination, precipitations, immunofluorescence, immunoelctrophoresis, and complement fixation. Other topics are: immediate and delayed hypersensitivities (i.e. allergies such as hay fever and poison ivy), immunological renal diseases, immunohematology (blood groups, etc), hybridome technology, the chemistry and function of complement, autoimmunity, and organ graft rejection phenomena. *Three hours of lecture, one three-hour laboratory, and one hour of arranged work per week. Prerequisite: BIO 110-111. Alternate years.*

348**ENDOCRINOLOGY**

This course begins with a survey of the role of the endocrine hormones in the integration of body functions. This is followed by a study of the control of hormone synthesis and release, and a consideration of the mechanisms by which hormones accomplish their effects on target organs. *Two three-hour lecture/laboratory periods per week. Prerequisite: BIO 110-111. Alternate years.*

400**BIOLOGY PRACTICUM**

A work-oriented experience for junior or senior biology majors jointly sponsored by the Department and a public or private agency. The practicum is designed to integrate classroom theory with field or laboratory practice. In addition to attendance at a weekly seminar, students will spend 10-12 hours per week at the sponsoring agency. Academic work will include, but is not limited to: a log, readings, recitation and an assigned research paper related to the specific agency's activities. *May be repeated once for credit with permission of the instructor.*

401**ENVIRONMENTAL PRACTICUM**

A work-oriented experience for junior or senior students interested in environmental science. Students work on projects jointly sponsored by the Clean Water Institute and a public or private agency. The practicum is designed to integrate classroom theory with field and/or laboratory practice. In addition to attendance at a weekly seminar, students spend 10-12 hours per week at the sponsoring agency or project. Academic work includes, but is not limited to a log, readings, recitation and an assigned research paper related to the specific agency or project activity. *May be repeated once for credit with permission of the instructor.*

430**COMPARATIVE ANATOMY
OF VERTEBRATES**

Detailed examination of the origins, structure, and functions of the principal organs of the vertebrates. Special attention is given to the progressive modification of organs from lower to higher vertebrates. *Three hours of lecture and one four-hour laboratory per week.* Prerequisite: BIO 110-111. Alternate years.

431**HISTOLOGY**

A study of the basic body tissues and the microscopic anatomy of the organs and

structures of the body which are formed from them. Focus is on normal human histology. *Three hours of lecture and one four-hour laboratory per week. Prerequisite: BIO 110-111. Alternate years.*

435**CELL BIOLOGY**

An intensive study of the cell as the basic unit of life. Topics will include: origins of cellular life, biochemistry of the cell, enzymatic reactions, cellular membranes, intracellular communication, the cell cycle, the cytoskeleton and cell motility, protein sorting, distribution and secretion. *Prerequisites: BIO 110-111 and one semester of organic chemistry. Alternate years.*

436**EVOLUTION**

The study of the origin and modification of life on earth. Topics discussed include molecular evolution, population genetics, gene flow, natural selection, sexual selection, kin selection, neutral theory, extinction, co-evolution, and the evolution of man. *Four hours of lecture per week. Prerequisite: BIO 110-111, or consent of instructor. Alternate years.*

437**MOLECULAR BIOLOGY**

An in-depth analysis of fundamental cellular information flow processes with particular emphasis on how these processes have been harnessed in the laboratory, resulting in technologies such as DNA cloning and sequencing, the Polymerase Chain Reaction (PCR), genetic testing, gene therapy, genetic engineering, DNA forensics, and construction of gene libraries. *Two hours of lecture, a one-hour lab and a three-hour lab per week. Prerequisites: BIO 110-111 and one semester of organic chemistry.*

439**MEDICAL GENETICS**

This course is concerned with the relationships of heredity to disease. Discussions will focus on topics such as chromosomal abnormalities, metabolic variation and disease,

somatic cell genetics, genetic screening, and immunogenetics. Laboratory exercises will offer practical experiences in genetic diagnostic techniques. *Prerequisite: BIO 110-111. May term only.*

440

PARASITOLOGY AND MEDICAL ENTOMOLOGY

The biology of parasites and parasitism. Studies on the major groups of animal parasites and anthropod vectors of disease will involve taxonomy and life cycles. Emphasis will be made on parasites of medical and veterinary importance. *Three hours of lecture and one three-hour laboratory per week. Prerequisite: BIO 110-111. Alternate years.*

444

BIOCHEMISTRY

Emphasis is given to the metabolism of carbohydrates, lipids, amino acids, proteins, and nucleic acids; integration of metabolism; and biochemical control mechanisms, including allosteric control, induction, repression, signal transduction as well as the various types of inhibitive control mechanisms. *Three hours of lecture, one three-hour laboratory and one hour of arranged work per week. Prerequisite: CHEM 221, or consent of instructor. Cross-listed as CHEM 444. Alternate years.*

445

RADIATION BIOLOGY

A study of the effects of ionizing and non-ionizing radiations on cells, tissues and organisms. Consideration will be given to repair mechanisms and how repair deficiencies elucidate the nature of radiation damage. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110-111, one year of chemistry. Alternate years.*

446

PLANT PHYSIOLOGICAL ECOLOGY

A study of plant resource acquisition in the face of competing neighbors and the quickly

changing global environment. The course will focus on how differences in the environment affect plant water use, carbon dioxide acquisition, light capture and nutrient uptake. *Three hours of lecture and one three-hour laboratory per week. Prerequisite: Bio 110-111 and 225. Alternate years*

349 & 449

BIOLOGY COLLOQUIUM

This course offers the student a chance to become familiar with research in the biological sciences using techniques such as meeting and talking with active researchers, reading and critically analyzing the current literature, and discussing the ideas and methods shaping biology. Students will be required to read and analyze specific papers, actively participate in discussions. Biology majors with junior and senior standing are required to successfully complete colloquium during all semesters on campus except for semesters when student teaching. *The grade will be P/F. Non-credit course. One hour per week. Prerequisites: biology majors with junior or senior class standing.*

470-479

INTERNSHIP (See index)

Recent samples of internships in the department include ones with the Department of Environmental Resources, nuclear medicine or rehabilitative therapies at a local hospital.

N80-N89

INDEPENDENT STUDY (See index)

Departmental studies are experimentally-oriented and may entail either lab or field work.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

Examples of recent honors projects have involved stream analysis, gypsy moth research, drug synthesis and testing.



BUSINESS ADMINISTRATION

(BUS)

Associate Professors: Henninger (Chairperson),
Weaver

Assistant Professors: Sterngold, Toncar

Part-time Instructor: Larrabee

This major is designed to educate students about business and management functions in both commercial and non-commercial organizations. The program provides a well-balanced preparation for a wide variety of professions and careers, including banking, financial services, small business management, marketing, sales, advertising, retailing, general management, supervision, investments, human resources management, and management information systems. The major is also appropriate for students who plan to attend graduate school in business or related fields, such as law or public administration.

All students majoring in Business Administration must complete the ten core courses and at least one of the four tracks listed below.

Core courses required of all majors:

ACCT 110; BUS 223, 228, 244, 312, 320, 338, 441; ECON 110 or 111. Statistics is also required.

Track requirements:

1. General Management:

ACCT 130; BUS 330, 449; one course from BUS 235, 332, 343, 345, 429

2. Financial Management:

ACCT 130; BUS 339; two courses from BUS 340, 345, 435, ECON 220

3. Marketing Management:

BUS 319, 342, 429; one course from BUS 332, 343, 344, 444

4. International Business Management:

Two courses selected from BUS 319, 330, 435; ECON 343; PSCI 225; one course selected from ECON 240, PSCI 221, PSCI 326; and two higher-numbered language courses beyond those used to meet the foreign language distribution requirement.

Majors in the International Business Management track are encouraged to minor in a foreign language. Additionally, it is the expectation, though not a requirement, that they will complete a practicum or internship relating to international business, preferably in a foreign country.

Minors

The department offers three minors:

- (1) general management,
- (2) financial management, and
- (3) marketing management.

1. General Management:

Students are required to complete BUS 112, 228, 244, one course in the department numbered 300 or higher, and either BUS 223 or a second course in the department numbered 300 or higher. If two courses are taken numbered 300 or higher, each must be chosen from a different major track.

2. Financial Management:

Students are required to complete BUS 338, 339, 340, ECON 220 and either ECON 441 or BUS 345.

3. Marketing Management:

Students are required to take BUS 228, and any four from: BUS 319, 332, 342, 343, 344, 429, 444.

Internships

Through BUS 439, Business Practicum, and BUS 325, International Internship, the department offers a wide variety of U.S. and international internships with businesses, government agencies and nonprofit organization. In addition, the department is a member of the institute for Management Studies, which also offers internships, including several full-time paid internships during the summer.

Recommended Courses

All majors and minors are encouraged to complete a selection of the following courses:

- ACCT 130 Accounting for Managerial Decision-Making (Track 3 majors)

- BUS 235 Legal Principles I
- ECON 110 Principles of Macroeconomics and 111 Principles of Microeconomics
- COMM 211 Public Speaking and Group Communication, 323 Feature Writing for Special Audiences, and 235 Writing and Speaking in Business and the Professions
- PHIL 216 Philosophical Issues in Business
- PSCI 110 Government and Politics in the United States

The following courses have been approved to be offered as cultural diversity courses: BUS 244, 319. Students must check semester class schedules to determine which courses are offered as "D" courses for that semester.

Writing Intensive Courses

The following courses have been approved to be offered as writing intensive courses and may be offered as such: BUS 244, 330, 340, 342, 344, 441. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Institute for Management Studies

The Department of Business Administration is a member of the Institute for Management Studies. See page 115.

112

BUSINESS AND SOCIETY

A critical examination of the role of business in modern society. Topics include the social and economic roles of business management techniques by commercial and non-commercial organizations (e.g., banks, manufacturers, retail stores, hospitals), and business careers and functions. Designed for students considering majors or minors in business, and for non-majors seeking a broad understanding of business. *May not be taken for credit by students who have successfully completed four or more courses in BUS.*

223**QUANTITATIVE BUSINESS ANALYSIS**

A study of the opportunities and shortcomings of a quantitative approach to managerial decision-making. Using hand-computed and computer generated decisional models, students explore quantitative applications to quality control, resource allocation, inventory control, decisional analysis, network scheduling, forecasting, and other topics. *Prerequisite: Statistics, or consent of instructor.*

228**MARKETING PRINCIPLES**

A study of the methods used by business and nonprofit organizations to design, price, promote and distribute their products and services. Topics include new product development, advertising, retailing, consumer behavior, marketing strategy, ethical issues in marketing and others. Readings, case studies, library assignments and team research projects.

235**LEGAL PRINCIPLES I**

Lectures and analyses of cases on the nature, sources, and fundamentals of the law in general, and particularly as relating to contracts, agency, and negotiable instruments.

236**LEGAL PRINCIPLES II**

Lectures on the fundamentals and history of the law relating to legal association, real property, wills, and estates.

244**MANAGEMENT AND ORGANIZATIONAL BEHAVIOR**

A study of the complex character of organizational life and the discipline and process of management. Topics include the evolution and scope of organizations and management, planning, organizing, leading, and controlling. Emphasis is placed on the importance of managing in a global environment, understanding the ethical implications of managerial decisions, and appreciating work place diversity.

312**HUMAN RESOURCE MANAGEMENT**

A study of the recruitment, selection, development, compensation, retention, evaluation, and promotion of personnel within an organization. Emphasis is on understanding these major activities performed by Human Resource Management professionals as organizations deal with increased laws and regulations, the proliferation of lawsuits related to Human Resources, changes in work force characteristics, and an increasingly competitive work environment. *One-half unit of credit.*

Prerequisite: BUS 244 or consent of instructor.

319**INTERNATIONAL MARKETING**

An investigation of the challenges of doing business in an increasingly global environment. Special emphasis is placed on the cultural and social diversity of international markets. Examines the marketing strategies of global firms, and the challenges of international pricing, distribution, advertising and product development. *Prerequisite: BUS 228 or consent of instructor.*

320**MANAGEMENT INFORMATION SYSTEMS**

A study of computer information systems and digital networks from the perspective of business managers and other end-users. Topics include the components and functions of management information systems, personal productivity applications, distributed networks and communication systems (including the Internet and World Wide Web), database management, electronic commerce and other emerging technologies and business applications. *One-half unit of credit. Prerequisite: BUS 244 or consent of instructor.*

325**INTERNATIONAL INTERNSHIP**

A seven week overseas internship experience, supervised on site by a member of the Lycoming College faculty. The course includes

an internship with an organization in the host country, and a program of activities designed to familiarize the student with the cultural, political and legal environment of the host country. These activities include seminars, guest lecturers, visits to centers of government and to sites of cultural and/or historical importance. Previous internships have included: The Prince's Youth Business Trust, The Oxfordshire Chamber of Commerce, Oxford Brookes University, Critchley's Chartered Accountants, Oxfam U.K., Spires International and FPD Savills International; all located in Oxford, England. Previous programs in the U.K. have included visits to the House of Parliament, Windsor Castle and Stonehenge, as well as weekend trips to Dublin, Ireland and Paris, France. Open to business and non-business majors and may be taken for four to eight semester hours of credit. *Prerequisite: consent of instructor. Summer term only. May be repeated for credit, provided that the 16-credit limit for practica, internships, and/or student teaching is not exceeded.*

330
INTERNATIONAL MANAGEMENT
A study of the dynamic process of applying management concepts and techniques in a multinational environment. Topics include global strategy and competitiveness, the cultural context, intercultural communications, organizational behavior and human resource management, and ethics and social responsibility. Special emphasis is placed on managing organizational cultures and diversity and the environment for international management.
Prerequisite: BUS 244 or consent of instructor.

332
ADVERTISING AND PROMOTION
How businesses and other institutions promote their products to consumers. The role of advertising and promotion in the marketing strategy of the firm in investigated, and the effects of different promotional tools

and advertising techniques is discussed.
Prerequisite: BUS 228 or consent of instructor.

338 **FUNDAMENTALS OF FINANCIAL MANAGEMENT**

A study of the fundamental theory, tools, and methods of financial management. Topics include the mathematics of finance, working capital management, capital budgeting, and analysis of financial statements. *Prerequisites: ACCT 110 and Statistics, or consent of instructor.*

339 **INTERMEDIATE FINANCIAL MANAGEMENT**

An intensive study of issues and applications of financial management. Topics covered include international finance, ethics, capital structures, cost of capital, financial analysis and forecasting. Extensive use of directed and non-directed cases. *Prerequisite: BUS 338 or consent of instructor.*

340 **INVESTMENTS**

An introduction to the financial sector of the economy and the structure and functions of financial markets and the agencies involved; brokerage houses and stock exchanges; the various types of investments available. Techniques used to evaluate financial securities. Also covered are recent developments in investment theory. *Prerequisite: BUS 338 or consent of instructor.*

342 **MARKETING RESEARCH**

This is a study of the principles and practices of marketing research. The focus is on the development and application of marketing research studies. Topics covered include selection of a research design, project planning and scheduling, data specification and gathering, quantitative methods to analyze data, inter-

pretation of data, and research report writing. Reading, cases, and research project. *Prerequisite: BUS 228 and Statistics, or consent of instructor.*

343**RETAIL AND SERVICES MARKETING**

A study of marketing practices by companies that directly sell goods and services to consumers, such as department stores, restaurants, mail-order firms, banks hospitals and accounting practices. Emphasis is placed on the methods used by organizations to attract and satisfy their customers and clients. *Prerequisite: BUS 228 or consent of instructor.*

344**ELECTRONIC COMMERCE AND INTERNET MARKETING**

A study of Internet marketing, electronic commerce, and related business uses of the Internet and Web. Topics include the challenges of developing, managing, and marketing commercial web sites and online stores; the growing use of company intranets, extranets and virtual teams to improve communications, collaboration, and business performance; and the effects of electronic commerce on consumers, competition and marketing practices. Students also study social links to electronic commerce, such as the privacy and security concerns of online customers, and the challenges of electronic commerce to more traditional industries, occupations, and local business and communities. *Prerequisite: BUS 228 or consent of instructor.*

345**FINANCIAL STATEMENT ANALYSIS**

Deals with the analysis of financial statements as an aid to decision making. The theme of the course is understanding the financial data which are analyzed as well as the methods by which they are analyzed and interpreted. This course should prove of value to all who need a thorough understanding of the uses to which financial statements are put as well as to those

who must know how to use them intelligently and effectively. This includes accountants, security analysts, lending officers, credit analysts, managers, and all others who make decisions on the basis of financial data.

Prerequisite: ACCT 110.

429**MARKETING STRATEGY**

A study of the methods used by business and nonprofit organizations to analyze and select target markets, and then to develop strategies for gaining and maintaining these customers. Topics include competitive strategy, market segmentation, product positioning, business demographics and marketing-related financial analysis. Readings, case studies, library assignments and computer exercises. *Prerequisites: BUS 228 and Statistics, or consent of instructor*

435**INTERNATIONAL FINANCIAL MANAGEMENT**

A study of the environment and methods of international financial management. Topics include international financial markets and instruments, analysis of capital budgeting and investment abroad, multinational working capital management, and foreign exchange and other risk. *Prerequisite: BUS 338, or consent of instructor. Alternate years.*

439**BUSINESS PRACTICUM**

This course provides students with practical work experience with local companies and organizations. Students work 10-12 hours per week for their sponsor organizations, in addition to attending a weekly seminar on management topics relevant to their work assignments. Since enrollment is limited by the available number of positions, students must apply directly to the business department before preregistration to be eligible for the course. *Consent of instructor.*

441**STRATEGIC MANAGEMENT**

An intensive study of the planning and control of business enterprises designed to build students' skills in conducting strategic analysis in a variety of industries and competitive situations. Through case studies, research, presentations, and discussions, students examine industry structure, functional strategies, competitive challenges of a global marketplace, and sources of sustainable competitive advantage. This course is designed to integrate the knowledge and skills gained from previous coursework in business and related fields. *Prerequisites: BUS 223, 228, 244, 312, 320, and 338, or consent of instructor. Seniors only.*

444**APPLIED MARKETING RESEARCH**

Students design, implement and present marketing studies for local businesses and other client organizations. Depending on the project, research methods may include customer surveys, focus groups, demographic studies and computerized information searches. In addition, students study market research methods and problems, such as designing questionnaires, selecting samples, detecting sources of bias, and presenting results to clients. *Prerequisite: BUS 342 or consent of instructor. May be repeated once for credit with consent of instructor.*

446**PRODUCTION MANAGEMENT**

An introduction to the planning, organization, and controlling of operations in a production facility. The course also incorporates quantitative techniques and computer applications used in the production and operations management environment. Topics include capacity and layout planning, facility location analysis, job design and work measurement, production scheduling, materials requirement planning models, and quality controls. Students

will engage in the actual design of an inventory status file and MRP system. *Prerequisite: BUS 223 or consent of instructor.*

449**SMALL BUSINESS MANAGEMENT AND ENTREPRENEURSHIP**

This course provides the student with the information needed to develop a business plan for starting and operating a small business enterprise. The course focuses on the key elements of planning and the essential characteristics of small businesses. The discussion and analysis of small business cases and the problems/opportunities facing small businesses are used to reveal trends in the small business community and the role of government.

Prerequisites: ACCT 130 and BUS 228, 244, 338; or consent of instructor.

470-479**INTERNSHIP (See index)**

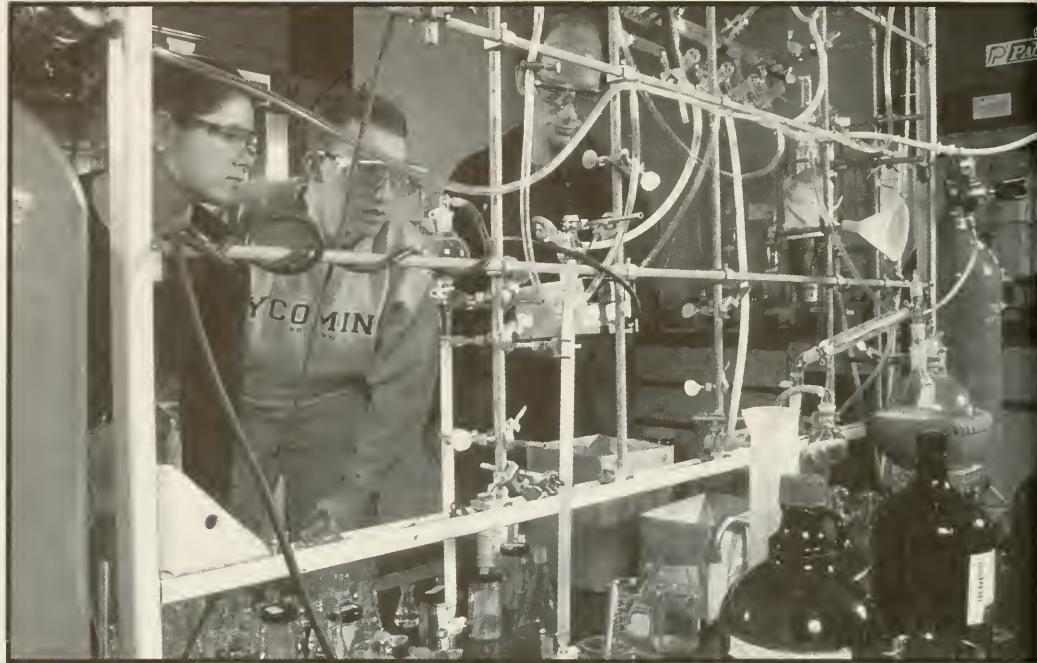
Recent projects include marketing analysis for a paper products firm, planning a branch store, real estate management and banking.

N80-N89**INDEPENDENT STUDY (See index)**

Examples of recent studies are: the economic impact of a college on a community and marketing strategy for a local firm entering the consumer market.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

A recent project was a study of the evolution of anti-trust legislation in the United States.



CHEMISTRY (CHEM)

Professor: Franz

Associate Professor: McDonald

Assistant Professors: Bendorf,
Mahler (Chairperson)

Part-time Assistant Professor: Berkheimer

Part-time Instructor: Miller

The Department of Chemistry offers both B.A. and B.S. degree programs, and is approved by the American Chemical Society (ACS) to certify those students whose programs meet or exceed requirements established by the ACS. Students who wish to earn ACS certification must complete the requirements for the B.S. degree. Students who complete the ACS certified degree are also eligible for admission to the American Chemical Society following graduation.

For students planning on graduate study in chemistry, German is the preferred foreign language option, and additional courses in advanced mathematics and computer science are also recommended.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: CHEM 330, 331 and 332. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

The B.A. degree

To earn the B.A. degree a student must complete CHEM 110-111, 220-221, 330-331, 332, 333, and, as a Capstone experience, one of the following: CHEM 449, 470, 490 or the Professional Semester (EDUC 446, 447 & 449); PHYS 225-226; and MATH 128-129.

The B.S. degree

To earn the B.S. degree a student must complete the thirteen course major described above as well as CHEM 443, CHEM 444, and one additional full-credit course from the following list: any 400-level CHEM course; PHYS 331 or above; BIO 222 or above; MATH 116, 123, 130, 214, 231, 238, 332; or CPTR 125.

Certification in Secondary Education

A Chemistry major interested in becoming certified in secondary education in Chemistry and/or General Science/Chemistry should, as early as possible, consult the current Department of Education Teacher Education Handbook and make their plans known to their advisor and the Chair of the Education Department so the required courses can be scheduled for the Professional Semester. A Chemistry major who successfully completes the Professional Semester (EDUC 446, 447 & 449) has also satisfied the Chemistry Capstone experience.

- a) To be certified in secondary education in chemistry a student must: complete a chemistry major; pass two biology courses numbered 110 or higher, PSY 110 and 338, and EDUC 200; complete the Pre-Student Teaching Participation and pass the Professional Semester (EDUC 446, 447 & 449). The student may choose EDUC 232 and/or EDUC 239 as additional Education electives.
- b) A student interested in obtaining General Science/Chemistry certification must complete all the requirements for secondary certification in chemistry shown in (a) and must also pass any two units from ASTR 111, 112 or 243. ASTR 230 is strongly recommended as an additional course.

Minor

A minor in chemistry requires completion of CHEM 110-111, 220-221, and two CHEM courses numbered 300 or higher.

100

CHEMISTRY IN CONTEXT

A science distribution course for the non-science major. The course will explore real-world societal issues that have important chemical components. Topics covered may include air and water quality, the ozone layer, global warming, energy, acid rain, nuclear

power, pharmaceuticals and nutrition. The chemistry knowledge associated with the issues is built on a need-to-know basis. *Three hours of lecture and one two-hour laboratory period each week. Not open for credit to students who have received credit for CHEM 110.*

110

GENERAL CHEMISTRY I

A quantitative introduction to the concepts and models of chemistry. Topics include stoichiometry, atomic and molecular structure, nomenclature, bonding, thermochemistry, gases, solutions, and chemical reactions. The laboratory introduces the student to methods of separation, purification, and identification of compounds according to their physical properties. This course is designed for students who plan to major in one of the sciences. *Three hours lecture, one hour of discussion and one three-hour laboratory period each week. Prerequisite: MATH 100 or consent of the Chemistry Department.*

111

GENERAL CHEMISTRY II

A continuation of CHEM 110, with emphasis placed on the foundations of analytical, inorganic, and physical chemistry. Topics include kinetics, general and ionic equilibria, acid-base theory, electrochemistry, thermodynamics, nuclear chemistry, coordination chemistry, and descriptive inorganic chemistry of selected elements. The laboratory treats aspects of quantitative and qualitative inorganic analysis. *Three hours of lecture, one hour of discussion, and one three-hour laboratory period each week. Prerequisite: CHEM 110 or consent of department.*

115

BRIEF ORGANIC CHEMISTRY

A descriptive study of the compounds of carbon. This course will illustrate the principles of organic chemistry with material relevant to students in medical technology, biology, forestry, education and the humanities. Topics include nomenclature, alkanes, arenes, functional derivatives, amino acids

and proteins, carbohydrates and other naturally occurring compounds. This course is designed for students who require only one semester of organic chemistry, and is not intended for students planning to enroll in chemistry courses numbered 200 or above. *Three hours of lecture, one hour of discussion, and one three-hour laboratory period each week.* Prerequisite: CHEM 111. Not open for credit to students who have received credit for CHEM 220.

220-221**ORGANIC CHEMISTRY**

A systematic study of the compounds of carbon, including both aliphatic and aromatic series. The laboratory work introduces the student to simple fundamental methods of organic synthesis, isolation, and analysis. *Three hours of lecture and one four-hour laboratory period each week.* Prerequisite: CHEM 111.

330-331**PHYSICAL CHEMISTRY**

A study of the fundamental principles of theoretical chemistry and their applications. The laboratory work includes techniques in physiochemical measurements. *Three hours of lecture and one four-hour laboratory period each week.* Prerequisite: CHEM 111, MATH 129, and one year of physics; or consent of instructor.

332**ANALYTICAL CHEMISTRY**

A study of the fundamental methods of gravimetric, volumetric and elementary instrumental analysis together with practice in laboratory techniques and calculations of these methods. *Two hours of lecture and two three-hour laboratory periods each week.* Prerequisite: CHEM 111 or consent of instructor.

333**ADVANCED INORGANIC CHEMISTRY**

A study of modern theories of atomic and molecular structure and their relationship to the chemistry of selected elements and their compounds. *Three hours of lecture and one four-hour laboratory period each week.* Prerequisite: CHEM 330, MATH 129, and one year of physics; or consent of instructor.

439**INTRODUCTION TO QUANTUM MECHANICS**

After presenting the origin, basic concepts, and formulation of quantum mechanics with emphasis on its physical meaning, the course will investigate the free particle, simple harmonic oscillator, and central-force problems. Both time-independent and time-dependent perturbation theory will be covered. The elegant operator formalism of quantum mechanics will conclude the course. *Four hours of lecture and recitation.* Prerequisites: MATH 231, either CHEM 331 or PHYS 226, and consent of instructor. Cross-listed as PHYS 439.

440**ADVANCED ORGANIC CHEMISTRY**

Theory and application of modern synthetic organic chemistry. Topics may include oxidation-reduction processes, carbon-carbon bond forming reactions, functional group transformations, and multi-step syntheses of natural products (antibiotics, antitumor agents, and antiviral agents). *Three hours of lecture and one four-hour laboratory period.* Prerequisite: CHEM 221.

442**SPECTROSCOPY AND MOLECULAR STRUCTURE**

Theory and application of the identification of organic compounds. Special emphasis will be placed on the utilization of spectroscopic techniques (H-NMR, C-NMR, IR, UV-VIS, and MS). *Three of hours lecture and one four-hour laboratory period each week.* Prerequisites: CHEM 221.

443**ADVANCED ANALYTICAL CHEMISTRY**

A study of advanced analytical methods with emphasis on chromatographic, electrochemical, and spectroscopic methods of instrumental analysis. *Three hours lecture and one four-hour laboratory period each week.* Prerequisite: CHEM 331 and 332, or consent of instructor.

444**BIOCHEMISTRY**

Emphasis is given to the metabolism of carbohydrates, lipids, amino acids, proteins, and nucleic acids; integration of metabolism; and biochemical control mechanisms, including allosteric control, induction, repression, signal transduction as well as the various types of inhibitive control mechanisms. *Prerequisite:* CHEM 221, or consent of instructor. *Cross-listed as BIO 444.*

446**ORGANOMETALLIC CHEMISTRY**

An introduction to the chemistry of compounds containing metal-carbon bonds. Topics include structure and bonding, reactions and mechanisms, spectroscopy, and applications to organic synthesis. The use of organometallic compounds as catalysts in industrial processes will be emphasized. *Three hours of lecture and one four-hour laboratory period each week. Prerequisite: CHEM 221.*

447**POLYMER CHEMISTRY**

An introduction to the synthesis, characterization, and applications of high molecular weight materials, i.e., macro-molecules. Special emphasis will be given to synthetic polymer systems. *Three hours of lecture, one four-hour lab per week. Prerequisites: CHEM 221 and 330, or consent of instructor.*

348 & 448**CHEMISTRY COLLOQUIUM**

A seminar in which faculty, students and invited professional chemists discuss their own research activities or those of others which have appeared in recent chemical literature. *Prerequisite: Three semesters of non-credit Chemistry Colloquium taken during the junior and senior years.*

449**CHEMISTRY RESEARCH METHODS**

This course focuses on the nature and practice of chemistry. Students will conduct research into a particular chemical problem with a faculty research advisor, and will explore different aspects of chemistry and discuss their research in a weekly seminar. A report on the research will be written. Majors are strongly encouraged to enroll in this course in either their junior or senior year. *Prerequisite: CHEM 221 and consent of instructor.*

470-479**INTERNSHIP (See index)**

The student will ordinarily work under supervision in an industrial laboratory and submit a written report on the project. To satisfy the Chemistry Capstone requirement, participation in the seminar portion of CHEM 449 is required.

N80-N89**INDEPENDENT STUDY (See index)**

The student will ordinarily work on a laboratory research project and will write a thesis on the work.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

The student will ordinarily work on a laboratory research project with emphasis on showing initiative and making a scholarly contribution. A thesis will be written. To satisfy the Chemistry Capstone requirement, participation in the seminar portion of CHEM 449 is required.

COMMUNICATION

Assistant Professors: Wild (Chairperson),
Koehn

The major in Communication seeks to provide a foundation in communication theory and media criticism as well as expertise in a particular area of communication. All students majoring in Communication must complete the five courses listed in the Core and eight additional courses in one of the three areas of concentration listed below: four required courses and four elective courses. Sophomores, juniors, and seniors who have declared a major in Communication are required to enroll in and successfully complete the non-credit Media Arts Colloquium during each semester they are on campus or until they have successfully completed at least four semesters of this noncredit course. All students in this major should consider electing an internship before graduation.

The major in Communication enables students to pursue employment and/or graduate studies in a variety of fields including corporate communication, public relations, audio and video production, print and broadcast journalism, professional media writing, and media research and analysis.

All majors in Communication are encouraged to take advanced courses in a foreign language and to consider the following liberal arts electives: MATH 123 and/or courses in Computer Science; ART 222 and 223; courses in contemporary American and/or international history, economics, and political science; and courses in literature from the Departments of Theatre, English, and Foreign Languages and Literatures.

The following courses have been designated as writing intensive and may be offered as such: COMM 211, 326. Students should check semester class schedules to determine which courses are offered as "W" courses for that semester.



Minor

A minor in Communication consists of any five courses offered by the Communication Department (courses offered by other departments count only toward the major in Communication not toward the minor). One of these five courses must be selected from COMM 326, COMM 348, or COMM 440.

CORE COURSES REQUIRED OF ALL MAJORS

COMM 110	Communication Principles and Ethics
COMM 211	Public Speaking: Research, Principles, and Practice
COMM 326	Media Criticism and Cultural Studies: Literature, Film, and Television
COMM 440	Senior Seminar
COMM 246,	Media Arts Colloquium 346, 446
THEA 212	Multicultural America on Screen

Majors must concentrate in one of the following three areas of study.

A. Corporate Communication

Required for all students in this concentration:

COMM 212	Group Communication and Conflict Resolution
COMM 235	Writing and Speaking in Business and the Professions
COMM 324	Public Relations Cases and Problem-Solving
PSCI 436	Mass Media Law and Regulation

Elective choices for students in this concentration must include at least one additional course in Communication as well as one course

at the 300-level or above. Students may elect to take as many additional communication courses as they choose. Elective courses offered by other departments that may also be used to fulfill elective requirements in this concentration include the following:

ART 227	Introduction to Photography
BUS 228	Marketing Principles
BUS 244	Organization and Management
BUS 332	Advertising and Promotion
PSCI 210	Communication and Society
PSY 225	Industrial and Organizational Psychology
PSY 324	Social Psychology

B. Electronic Media

Required for all students in this concentration:

COMM 218	Audio Production for Radio
COMM 223	Basic Video Production
COMM 348	Advanced Video Production
THEA 114	Film Art: Motion Picture Masterpieces

Elective choices for students in this concentration must include at least one additional course in Communication as well as one course at the 300-level or above. Students may elect to take as many additional communication courses as they choose. Elective courses offered by other departments that may be used to fulfill elective requirements in this concentration include the following:

ART 227	Introduction to Photography
ART 343	Computer Graphics for Print Media
ART 344	Computer Graphics for Electronic Media
BUS 228	Marketing Principles
PSCI 210	Communication and Society
PSCI 436	Mass Media Law and Regulation
PSY 324	Social Psychology

C. Media Writing

Required for all students in this concentration:

COMM 225	The Art of Script Writing
COMM 229	Print and Broadcast Journalism
COMM 323	Feature Writing for Special Audiences
PSCI 436	Mass Media Law and Regulation

Elective choices for students in this concentration must include at least one additional course in Communication as well as one course at the 300-level or above. Students may elect to take as many additional communication courses as they choose. Elective courses offered by other departments that may be used to fulfill elective requirements in this concentration include the following:

ART 227	Introduction to Photography
ENGL 217	Critical Writing Seminar
ENGL 240	Introduction to Creative Writing
ENGL 321	Advanced Writing: Technical and Professional
ENGL 322	Advanced Writing: The Creative Essay
PSCI 210	Communication and Society
THEA 114	Film Art: Motion Picture Masterpieces

110

COMMUNICATION PRINCIPLES AND ETHICS

Introduction to the basic theories and principles of communication as they apply to the process of sending messages among individuals, small groups, and mass audiences. Consideration of the ethical issues involved in the communication process. Active learning through readings, case studies, simulations, oral reporting, and library research. *Prerequisite: ENGL 105, or exemption.*

117

MEDIA WRITING PRINCIPLES WITH DESKTOP PUBLISHING

Intensive drill and practice in desktop publishing and the basic forms of media writing. Major emphasis on the elements of lead, style, and structure. Designed for students with little or no experience in desktop publishing and writing for the media. *Prerequisite: ENGL 106 or 107.*

211

PUBLIC SPEAKING: RESEARCH, PRINCIPLES, AND PRACTICE

Speaking extemporaneously in a variety of situations to general as well as targeted audiences. Emphasis on researching and

solving problems having to do with persuasion and informative speaking. Training in using rhetorical theory to prepare, deliver, and evaluate the student's own speeches. *Prerequisite: ENGL 106 or 107.*

212 GROUP COMMUNICATION AND CONFLICT RESOLUTION

Readings, case studies, simulations, and practice in the methods of working in groups and in resolving conflicts within and between groups in various contexts, including education, industry, and professional situations. Contemporary theory and methods for motivating and maintaining the productivity of groups will be examined in some detail.

Prerequisites: ENGL 106 or 107 and one other course in Communication (211 recommended), Psychology, Education, or Business.

218 AUDIO PRODUCTION FOR RADIO AND VIDEO

Study of the principles and techniques of audio production as applied to radio and other media. Consideration of various program formats and the use of sound media as an art form. Includes historical and contemporary examples of audio production and sound design.

223 BASIC VIDEO PRODUCTION

Training in the fundamentals of preproduction, production, and postproduction for video. Emphasis on mastering the basics of video production from concept to completion. *Prerequisites: course work or experience in technical theatre, photography, film studies, and/or audio production; or consent of instructor.*

225 THE ART OF SCRIPTWRITING

Training in analyzing and writing scripts for defined audiences and purposes. Developing the original screenplay as well as scripts for business, advertising, and education will be considered. *Prerequisite: ENGL 106 or 107, and THEA 114; or permission of instructor.*

229

PRINT AND BROADCAST JOURNALISM

Study of form and content of news gathering and beat reporting. Training in researching, interviewing, organizing, and editing a variety of news stories for the Lycoming College newspaper and for campus radio. Considers the ethical issues of reporting for print and broadcast. *Prerequisite: ENGL 106 or 107.*

235

WRITING AND SPEAKING IN BUSINESS AND THE PROFESSIONS

Study of communication theory as applied to business and professional settings. Using writing, speaking, research, and the electronic media to solve a variety of communication problems that frequently occur in the world of work. *Prerequisite: ENGL 106 or 107.*

312

LEADERSHIP COMMUNICATION

The theory and practice of leadership communication in diverse settings and contexts. Classic leadership styles will be examined and researched in regard to how these relate to goal-setting and motivating individuals and groups. Field work on- and off-campus is a major component of this course. *Prerequisites: ENGL 106 or 107; at least one of these: COMM 211, 212, or 235; or permission of the instructor. Corequisite (if not already completed): COMS 105 or 106. Alternate years.*

323

FEATURE WRITING FOR SPECIAL AUDIENCES

Practice in writing a variety of feature stories and editorials for different media and audiences. Study of the ways in which feature writing for magazines compares and contrasts with feature writing for newspapers and feature stories for television. Readings, peer review, and training in how to develop ideas using primary and secondary research. *Prerequisite: ENGL 106 or 107.*

324**PUBLIC RELATIONS CASES AND PROBLEM SOLVING**

Training in methods of public relations research, program planning and evaluation, working with the media, writing for public relations and advertising, and conducting a public relations campaign to solve a problem or crisis. Emphasis on writing, speaking, and electronic communication. *Prerequisite: ENGL 106 or 107 and COMM 235; or permission of instructor.*

326**MEDIA CRITICISM AND CULTURAL STUDIES: LITERATURE, FILM, AND TELEVISION**

Introduction to methods of analyzing popular culture and the arts using one or more of these approaches: textual criticism, content analysis, semiotics, auteur criticism, historical criticism, frame theory, and structural analysis. Comparison of the ways in which different media create values and portray individuals, social conflicts, and human aspirations.

Prerequisite: THEA 212 or ENGL 217.

332**TOPICS IN MEDIA THEORY AND PRACTICE**

Study of communication theory as applied to a special area or style of communication. Readings, discussions, and practical experiences in creating materials for print and/or electronic media. Possible topics include: docudrama and investigative reporting, communicating in cyberspace, creative advertising, instructional television and video. *May be repeated for credit with change of topic. Prerequisite: ENGL 106 or 107.*

348**ADVANCED VIDEO PRODUCTION**

Advanced production of documentary, narrative, and experimental video. Exploration of a variety of approaches to motivating talent and directing for the camera. *Prerequisite: COMM 223 and THEA 114, or advanced course work in acting and directing, or consent of instructor.*

246, 346, and 446**MEDIA ARTS COLLOQUIUM**

A seminar in which faculty, students, and invited professionals meet two or three times each semester to discuss topics pertaining to the field of communication and to the work students are doing in campus media. Each student enrolled in the seminar is required to keep a log and to work for a minimum of three hours each week in one or more of the following: campus newspaper; campus yearbook; campus radio; campus television; public relations; corporate communication. *Open only to majors. Non-credit and Pass/Fail. Once the major is declared, students are required to enroll in the seminar each semester until they graduate or until they have successfully completed four semesters, whichever comes first.*

400**PRACTICUM**

An elective for junior and senior majors who wish to acquire additional experience in working with practicing professionals. *Open only to majors and minors.*

440**SENIOR SEMINAR**

Reading and discussion of one or more topics of interest to communication specialists. Focus on preparing individual projects related to seminar topics and the student's area(s) of expertise for public presentation. Majors are required to enroll in this course either in their junior or senior year. *Prerequisite: COMM 326. Open to nonmajors with consent of instructor.*

470-479**INTERNSHIP**

Interns usually work off-campus in a field related to their area of study. *Prerequisite: junior or senior standing.*

N80-N89**INDEPENDENT STUDY (See index)**

Studies involve research related to the area of study of the student.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

COMPUTER SCIENCE

(see Mathematical Sciences)

CRIMINAL JUSTICE (CJ)

Assistant Professor: Carter (Coordinator)

Criminal Justice is an interdisciplinary social science program. Course work leading to this baccalaureate degree will provide students with strong communication and analytical skills. This is accomplished through a critical and in-depth interdisciplinary analysis of the causes of crime, formal and informal efforts at preventing and controlling crime, and treatment of the field of criminal justice as an applied social science where students are taught to integrate theory construction with practical application. The Criminal Justice Program offers opportunities for internship and practicum experiences in the field, and prepares students for careers in law enforcement, court services, institutional and community-based corrections, treatment and counseling services, and for further education at the graduate level.

Major in Criminal Justice

The major consists of 11 courses, distributed as follows:

A. Criminal justice core courses (four courses):

- CJ 100 Introduction to Criminal Justice
- CJ 201 Law Enforcement
- CJ 203 Correctional Systems
- CJ 447 Research Methods in Criminal Justice

B. Courses in the social, psychological, philosophical, and political dimensions of the justice system (seven courses):

- PHIL 218 Issues in Criminal Justice
- PSY 116 Abnormal Psychology



SOC 222 Introduction to Human Services
 SOC 300 Criminology

Two courses from:

PSCI 331	Civil Rights and Liberties
PSCI 332	Courts and the Criminal Justice System
PSCI 335	Law and society

One course from:

SOC 221	Juvenile Delinquency
SOC 334	Cultural Minorities

C. Criminal Justice Practicum (strongly recommended, but not required for the major).

Majors should seek advice concerning course selection from their advisors or from the criminal justice coordinator, and should note course prerequisites in planning their programs.

Minor in Criminal Justice

A minor in criminal justice consists of five courses: CJ 100, CJ 201, CJ 203, PSCI 332,

and SOC 300. A student may substitute another relevant course for one of the required courses with consent of the criminal justice coordinator.

Writing Intensive Courses

CJ 477, PHIL 218, and SOC 222, when scheduled as W courses, count towards the writing intensive requirement.

100

INTRODUCTION TO CRIMINAL JUSTICE

This course explores the role of law enforcement, courts and corrections in the administration of justice; the development of police, courts and corrections; the scope and nature of crime in America; introduction to the studies, literature and research in criminal justice; basic criminological theories; and careers in criminal justice.

201

LAW ENFORCEMENT

Students learn the history of law enforcement and the ways in which policing is evolving within a community-based philosophy. Special emphasis is placed on law enforcement organizations, patrol and investigation strategies, methods of social control, police-community relations, civil liability, abuse of power, important case laws, and critical analysis of law enforcement policies. *Prerequisite: CJ 100.*

203

CORRECTIONAL SYSTEMS

This course presents an overview of offenders, punishment, correctional ideologies, and societal reaction to crime. The historical and philosophical development of the correctional system is examined. The primary emphasis is on critical analysis of contemporary correctional programming for adult and juvenile offenders in the United States. Other social issues and structures directly related to corrections are explored. *Prerequisite: CJ 100.*

340

PROBATION AND PAROLE

This course provides an in-depth study of community-based corrections programs and their impact on the offender, the criminal justice system, and society. Particular attention is given to offender diagnostics and classification, treatment and supervision needs, pre-sentence and pre-parole investigations, casework planning, applicable laws, and corrections policies. *Prerequisite: CJ 100 or consent of instructor.*

341

CRIME PREVENTION

Students examine crime prevention and control policies, programs, and procedures to determine what works and why. The focus is on social, situational, and environmental sources of crime. Crime prevention measures focus on reducing crime by re-creating physical design, by empowering citizen organizations, through programs that build safe communities, and through programs in place among "at risk" populations in schools, neighborhoods, and homes. *Prerequisite: CJ 100 or consent of instructor.*

342

ORGANIZATIONAL CRIME

Three major areas of organizational crimes are covered, including traditional organized crime, crimes of the corporate world, and crimes committed under auspices of the government. Examples of topics include international organized crime cabals, drug trafficking and money laundering by the CIA, political bribe taking, government brutality and physical/economic coercion, civil rights violations, and crimes situated in the manufacturing, pharmaceutical, and service trades. *Prerequisite: CJ 100 or consent of instructor.*

345

SPECIAL TOPICS IN CRIMINAL JUSTICE

This is a seminar for advanced students offered in response to student request and

faculty interest. This course may be repeated for additional credit with approval of the criminal justice coordinator, but only when course content differs. Sample topics include the death penalty, hate crimes, civil liability in criminal justice, justice in the media, environmental crime, etc. *Prerequisite: CJ 100 or consent of instructor.*

447**RESEARCH METHODS IN CRIMINAL JUSTICE**

Students learn social science methods, research design and implementation, and evaluation of contemporary research in criminal justice. Topics covered include the logic of causal order, sampling theory, qualitative and quantitative design, data collection, and proper analysis of data. This course is a how-to-do research course that requires students to conduct original research projects under supervision. Students actively engage in content analysis, behavioral observation, survey and interview-based research, and limited quasi-experimental design studies. Emphasis is placed on conducting field research and communicating research in writing. Each student prepares a literature review and written research proposal that can be carried out while placed with a criminal justice agency on practicum (CJ 448). *Prerequisites: CJ 100, CJ 201, and CJ 203, or consent of instructor.*

448-449**CRIMINAL JUSTICE PRACTICUM**

Students are placed with criminal justice agencies, providing opportunities to apply classroom knowledge in an organizational setting, encouraging development of professional skills, helping students identify and clarify career interests, and providing opportu-

nities to conduct hands-on field research. Each student completes an original research project under supervision of the instructor with input from the on-site agency representative. Students will prepare a comprehensive, formal, written research paper on an appropriate topic. *Prerequisite: CJ 100 or consent of criminal justice coordinator.*

470**INTERNSHIP**

Students desiring an internship in criminal justice must get considerably advanced approval by the criminal justice coordinator. Criminal justice internships normally will not be approved for semesters during which practicums are also available. Internships are intended as a four-credit-only course. However, under unusual circumstances, up to 12 credits may be approved by the criminal justice coordinator. An example of an appropriate 12-credit internship is the FBI Honors Internship Program, which requires relocation to Washington, DC and participation in a full-time program that runs the duration of the summer. *Prerequisite: CJ 100.*

N80**INDEPENDENT STUDY**

This course represents an opportunity to pursue specific interests and topics not usually covered in regular courses. Through a program of readings and tutorials, the student will have the opportunity to pursue these interests and topics in greater depth than is usually possible in a regular course. *Prerequisite: CJ 100 and consent of criminal justice coordinator.*

N90**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS**



ECONOMICS (ECON)

Associate Professor: Madresehee

Assistant Professors: Sprunger (Chairperson),
Yerger

The Department of Economics offers two tracks. Track I (Managerial Economics) develops students' capacity to analyze the economic environment in which an organization operates and to apply economic reasoning to an organization's internal decision making. These courses have more of a managerial emphasis than traditional economics courses. Track II (General Economics) is designed to provide a broad understanding of economic, social, and business problems. In addition to preparing students for a career in business or government, this track provides an excellent background for graduate or professional studies.

Track I - Managerial Economics requires ECON 110, 111, 220, 332 and 441; ACCT 110 and either ACCT 130 or BUS 429; BUS 338; and two other economics courses numbered 200 or above, excluding ECON 349.

Track II - General Economics requires ECON 110, 111, 331, 440, and 441, and three other courses in economics. Depending on their academic and career interests, students are encouraged to select a minor in another department such as political science, philosophy, or history.

In addition, the following courses are recommended: all majors - MATH 123 and BUS 223; majors planning graduate work - MATH 112 and 128; Track II majors - ACCT 110 and either 130 or 344.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: ECON 337, 440. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Students interested in teacher certification should refer to the Department of Education on page 96.

Minor

A minor in economics requires the completion of ECON 110, 111 and three other economics courses numbered 200 or above, or any four economics courses numbered 200 or above.

The Department of Economics is a member of the Institute for Management Studies. See page 115.

102

CONSUMER ECONOMICS

A course in "family" or "practical" economics, designed to teach students how they and their families can be intelligent consumers; that is, how they can spend, save, and borrow so as to maximize the value they receive for the income they have. Treats subjects such as intelligent shopping; the uses

and abuses of credit; investing, savings, buying insurance, automobiles and houses; medical care costs; estates and wills, etc.

110**PRINCIPLES OF MACROECONOMICS**

Macroeconomics deals with problems of the economic system as a whole. What influences the level of national income and employment? What is inflation and why do we have it? What is the role of government in a modern capitalist system? How does business organize to produce the goods and services we demand? How are the American financial and banking systems organized? What is the nature of American unionism? What are the elements of government finance and fiscal policy?

111**PRINCIPLES OF MICROECONOMICS**

This course focuses upon microeconomics and selected current economic problems. It deals with the relatively small units of the economy such as the firm and the family. Analyzes demand and supply. Discusses how business firms decide what and how much to produce and how goods and services are priced in different types of markets. Also considers such problems as economic growth, international trade, poverty, discrimination, ecology, and alternative economic systems.

220**MONEY AND BANKING**

Covers business fluctuations and monetary and fiscal policy; the financial organization of society; the banking system; credit institutions; capital markets, and international financial relations. *Prerequisite: ECON 110.*

224**URBAN PROBLEMS**

The application of economic theory to the study of significant social, political, and economic problems associated with urbanization, including poverty, employment, education, crime, health, housing, land use and the

environment, transportation, and public finance. Analysis of solutions offered.

Prerequisite: ECON 110 or 111, or consent of instructor. Alternate years.

225**ENVIRONMENTAL ECONOMICS**

A study of the relationship between environmental decay and economic growth, with particular reference to failures of the price and property-rights systems; application of cost/benefit analysis, measures aimed at the creation of an ecologically viable economy.

229**BUSINESS CYCLES AND FORECASTING**

An introduction to the nature and history of business fluctuations, the tools used in aggregate analysis, theories that seek to explain the cycle, and techniques used in forecasting economic activity. *Prerequisite: ECON 110 or consent of instructor. Alternate years.*

230**ECONOMETRICS**

Econometric models provide one of the most useful and necessary sets of tools for decision-making. By using a variety of modern statistical methods, econometrics helps us to estimate economic relationships, test different economic behaviors, and forecast different economic variables. *Prerequisites: MATH 123, ECON 110 and 111; or consent of instructor. Alternate years.*

240**ECONOMIC GEOGRAPHY**

An introduction to the theory and practice of economic geography with emphasis upon the historical dynamics of local, regional, and global organization. This course considers the forces reshaping global economic geography including the factors that determine the competitive advantage of nations. These factors include resources such as food, energy, materials, and changing patterns of world

opulation. Also included will be theoretical literature regarding locational decisions and choice, as well as the rapidly changing global economy in the context of trade theory and the shifting focus of international economics activity.

327**PUBLIC CHOICE**

This course focuses on the application of economics to the political processes of voting and bureaucratic behavior. A major theme will be the study of problems that can occur within the democratic process because the incentives given to public servants do not always match society's best interests. Policies and institutions that can improve such problems will be explored. U.S. elections and campaigns will provide many of the applications for the class. *Prerequisite: ECON 110 or 111, or consent of instructor. Alternate years.*

330**INTERMEDIATE MICROECONOMICS**

An advanced analysis of contemporary theory regarding consumer demand, production costs and theory, profit maximization, market structures, and the determinants of returns to the factors of production. *Prerequisite: ECON 110. Alternate years.*

331**INTERMEDIATE MACROECONOMICS**

An advanced analysis of contemporary theory and practice with regard to business fluctuation, national income accounting, the determination of income and employment levels, and the use of monetary and fiscal policy. *Prerequisite: ECON 110. Alternate years.*

332**GOVERNMENT AND THE ECONOMY**

An analytical survey of government's efforts to maintain competition through antitrust legislation to supervise acceptable cases of private monopoly, through public

utility regulation and via means of regulatory commissions, and to encourage or restrain various types of private economic activities. *Prerequisites: ECON 110 and 111, or consent of instructor.*

335**LABOR PROBLEMS**

The history of organized labor in the United States, including the structure of unions, employers' opposition to unions, the role of government in labor-management relations and the economic impact of unions. *Alternate years. Prerequisite: ECON 110 or 111, or consent of instructor.*

337**PUBLIC FINANCE**

An analysis of the fiscal economics of the public sector, including the development, concepts, and theories of public expenditures, taxation, and debt at all levels of American government. Also includes the use of fiscal policy as an economic control device. *Prerequisites: ECON 110 and 111, or consent of instructor. Alternate years.*

343**INTERNATIONAL TRADE**

A study of the principles, theories, development, and policies concerning international economic relations, with particular reference to the United States. Subjects covered include: U.S. commercial policy and its development, international trade theory, tariffs and other protectionist devices, international monetary system and its problems, balance of payments issues. *Alternate years. Prerequisites: ECON 110 and 111.*

349**MANAGEMENT PRACTICUM**

An apprentice-level work experience for junior or senior economics majors jointly sponsored by the department and a public or private agency (or a subdivision of the college itself) designed to better integrate classroom

theory and workplace practice. In addition to attendance at a weekly seminar, students will spend 10-12 hours per week at the sponsoring agency per unit of credit. At least one-half of the effort expended will consist of academic work related to agency activities.

440**HISTORY OF ECONOMIC THOUGHT**

A discussion of the origins, development, and significance of the economic ideas embodied in the works of Smith, Marx, Schumpeter, Keynes, and others. *Prerequisite: ECON 110 or consent of instructor. Alternate years.*

441**MANAGERIAL ECONOMICS**

The application of economic theory and methodology to the solution of business problems. Subjects include: optimizing techniques, risk analysis, demand theory, production theory, cost theory, linear programming, capital budgeting, market structures, and the theory of pricing. *Prerequisites: ECON 110 and 111.*

470-479**INTERNSHIP (See index)**

Typically off-campus in business, banking, or government, supervised by assigned employee of sponsoring organization.

N80-N89**INDEPENDENT STUDY (See index)**

Superior students may select independent study in various courses, particularly in preparation for graduate school.

490-491**INDEPENDENT STUDY FOR
DEPARTMENTAL HONORS (See index)****EDUCATION (EDUC)**

Assistant Professors: Chamberlain, Conrad, Hungerford (Chairperson)
Part-time Instructors: Hayden, Salvatori, Zalonis

The Education Department offers Pennsylvania-approved teacher certification programs in elementary and secondary education, as well as a school nurse certification program.

Students seeking secondary teacher certification must complete EDUC 200 and PSY 138 prior to the professional semester (EDUC 446, 447, 449) as well as the necessary subject area courses. Students must have the required 14 half-day observations with their assigned cooperating teacher during the semester prior to their professional semester. Students may earn secondary certification in one or more of the following areas: art (K-12), biology, chemistry, English, French (K-12), general science, German (K-12), mathematics (K-12), music (K-12), physics, school nurse (K-12), social studies, and Spanish (K-12).

Students seeking elementary teacher certification must complete EDUC 200, PSY 138, MATH 205, EDUC 000, 341, 342, 343,

and 344 prior to the professional semester (EDUC 445, 447, 448). Students must have the required 14 half-day observations with their assigned cooperating teacher during the semester prior to their professional semester.

Students interested in the teacher education program should refer to the *Teacher Education Handbook*, which specifies the current requirements for certification. Early consultation with a member of the Education Department is strongly recommended. Application for the professional semester must be made during the fall semester of the junior year. The Department of Education admits to the professional semester applicants who have (a) completed the participation requirements, (b) paid the student teaching fee, (c) obtained a recommendation from the student's major department, (d) passed a screening and interview conducted by the Education Department, (e) passed the PSST Reading, Writing, Math and Listening portions of the NTE exam, and (f) achieved an overall grade point average of 3.00 or better. Major departments have different criteria for their recommendations; therefore, the student should consult with the chairperson of the major department about those requirements. The Pennsylvania state requirements override any contractual agreement the student teacher has with the college via the catalogue under which they were admitted.

Additional teacher intern program information can be found on page 50.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: EDUC 343, 344 and 447. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

000 SEMINAR IN ART, MUSIC, PHYSICAL EDUCATION, and MATH ACTIVITIES

Each elementary student teacher attends a series of 24 seminars, conducted prior to

student teaching, during the fall semester of the senior year. These seminars, conducted by certified public school personnel, emphasize activities and knowledge which are helpful in the self-contained elementary classroom.

Non-credit course.

200

INTRODUCTION TO THE STUDY OF EDUCATION

A study of teaching as a profession with emphasis on the economic, social, political, and religious conditions which influence American schools and teachers. Consideration is given to the school environment, the curriculum, and the children with the intention that students will examine more rationally their own motives for entering the profession.

232

INSTRUCTIONAL MEDIA AND COMMUNICATIONS

A study of the value, design, construction, and application of the visual and auditory aids to learning. Practical experience in the handling of audio-visual equipment and materials is provided. Application of audio-visual techniques. Application of the visual and auditory aids to learning. Students will plan and carry out actual teaching assignments utilizing various A-V devices.

239

PUBLIC SCHOOL CURRICULUM

An examination of the various curricula of the public schools and their relationship to current practices. Special attention will be given to the meaning and nature of the curriculum, the desirable outcomes of the curriculum, conflicting and variant conceptions of curricula content, modern techniques of curricular construction, criteria for the evaluation of curricula, the curriculum as a teaching instrument. Emphasis will be placed upon the curriculum work within the teaching field of each individual.

341**TEACHING THE SOCIAL STUDIES IN THE ELEMENTARY SCHOOL**

Studies and experiences to develop a basic understanding of the structure, concepts, and processes of anthropology, economics, geography, history, political science, and sociology as they relate to the elementary school social science curriculum. Practical applications, demonstrations of methods, and the development of integrated teaching units using tests, reference books, films, and other teaching materials. Observation and participation in Lycoming County elementary schools. *Prerequisites: EDUC 200 and PSY 138, or consent of instructor.*

342**TEACHING SCIENCE IN THE ELEMENTARY SCHOOL**

Science methods and materials interpreting children's science experiences and guiding the development of the scientific concepts. A study of the science content of the curriculum, its material and use. Observation and participation in Lycoming County elementary schools. *Prerequisite: EDUC 200 and PSY 138, or consent of instructor.*

343**TEACHING LANGUAGE ARTS AND CHILDREN'S LITERATURE IN THE ELEMENTARY SCHOOL**

A course designed to consider means of communication, oral and written, including both practical and creative uses. Attention will be given to listening, speaking, written expression, linguistics and grammar, and spelling. Stress will be placed upon the interrelatedness of the language arts. Children's literature will be explored as a vehicle for developing creative characteristics in children and for ensuring an appreciation of the creative writing of others. Observation and participation in Lycoming County elementary schools. *Prerequisite: EDUC 200 and PSY 138, or consent of instructor.*

344**TEACHING READING IN THE ELEMENTARY SCHOOL**

A basic course in the philosophy and rationale for the implementation of an elementary reading program from kindergarten through sixth grade. Emphasis is upon designing a reading instructional program which reflects the nature of the learning process and recognizes principles of child development through examination of the principles, problems, methods, and materials used in elementary reading programs. *Prerequisite: EDUC 200 or PSY 138, or consent of instructor.*

The Elementary Professional Semester

The following courses comprise the Elementary Professional Semester:

EDUC 445	Methods of Teaching in the Elementary School
EDUC 447	Problems in Contemporary American Education
EDUC 448	Student Teaching in the Elementary School

445**METHODS OF TEACHING IN THE ELEMENTARY SCHOOL (PART OF THE PROFESSIONAL SEMESTER)**

The course emphasizes the relationship between the theoretical studies of physical, social and cognitive development and the elementary classroom environment. Particular consideration will be given to the appropriate age and developmental level of the students with an emphasis upon selection and utilization of methods in all the elementary subject areas, including art and music. Specific attention is given to the development of strategies for structuring lesson plans, for maintaining classroom control, and for overall classroom management. Direct application is made to the individual student teaching experience. *Prerequisites: MATH 205, EDUC 000, 341, 342, 343, and 344, and pre-student teaching participation.*

447

PROBLEMS IN CONTEMPORARY AMERICAN EDUCATION (PART OF THE PROFESSIONAL SEMESTER)

Seminar on the issues, problems, and challenges encountered by teachers in the American public schools, especially those related to the student teaching experience.

448

STUDENT TEACHING IN THE ELEMENTARY SCHOOL (PART OF THE PROFESSIONAL SEMESTER)

Professional experience under the supervision of a selected cooperating teacher in a public elementary school in Lycoming County. Student teachers are required to follow the calendar of the school district to which they are assigned. *Two units maximum.*

Students are considered full time when enrolled in the Professional Semester. Those students needing an additional course must comply with the standards stated in the College catalog.

The Secondary Professional Semester

The following courses comprise the Secondary Professional Semester:

EDUC 446 Methods of Teaching in the Middle Level and Secondary Schools

EDUC 447 Problems in Contemporary American Education

EDUC 449 Student Teaching in the Secondary School

The Art/Music (K-12) Professional Semester

The following courses comprise the Art/Music (K-12) Professional Semester:

EDUC 447 Problems in Contemporary American Education

EDUC 448 Student Teaching in the Elementary School
(6 semester hours)

EDUC 449 Student Teaching in the Secondary School
(6 semester hours)

446

METHODS OF TEACHING IN MIDDLE LEVEL AND SECONDARY SCHOOLS (PART OF THE PROFESSIONAL SEMESTER)

A study of materials, methods, and techniques with emphasis on the student's major. Specific attention is given to structuring unit and lesson plans, maintaining classroom discipline, and to overall classroom management. Stress is placed on the selection and utilization of a variety of strategies, materials, and technologies to support learning for a diverse student population. Students teach demonstration lessons in the presence of the instructor and members of the class and observe superior teachers in Lycoming County middle and secondary schools.
Prerequisites: EDUC 200, PSY 138, and pre-student teaching participation.

447

PROBLEMS IN CONTEMPORARY AMERICAN EDUCATION (PART OF THE PROFESSIONAL SEMESTER)

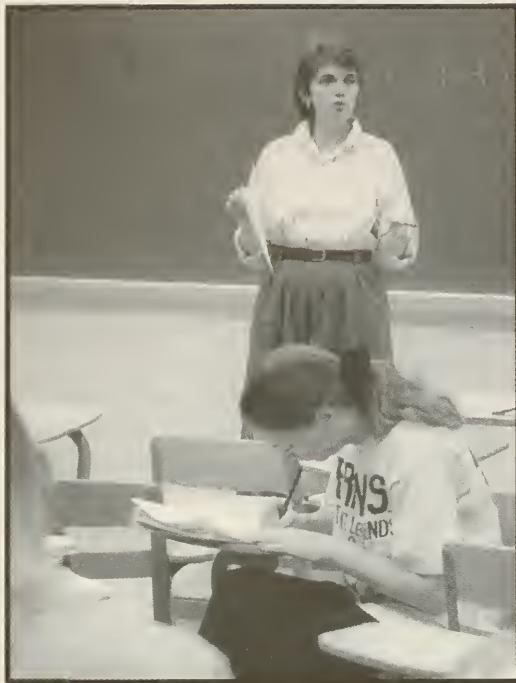
Seminar on the issues, problems, and challenges encountered by teachers in the American public schools, especially those related to the student teaching experience.

449

STUDENT TEACHING IN THE SECONDARY SCHOOL (PART OF THE PROFESSIONAL SEMESTER)

Professional laboratory experience under the supervision of a selected cooperating teacher in a public secondary school in Lycoming County. Student teachers are required to follow the calendar of the school district to which they are assigned. *Two units maximum.*

Students are considered full time when enrolled in the Professional Semester. Those students needing an additional course must comply with the standards stated in the College catalog.



ENGLISH (ENGL)

Professors: Hawkes, Jensen, Moses, Rife

Associate Professors: Feinstein,

Hafer, Lewes (Chairperson)

The department offers two programs leading to the major in English:

Track I - English Major in Literature

This track is designed for students who choose English as a liberal arts major that prepares them for a wide range of career options; for students who choose English as their subject area for elementary certification or who wish to earn secondary certification in English; for students who wish to improve their verbal and analytic ability in preparation for a specific career, such as technical writing, business, or law; and for students who intend to pursue graduate study in British or American literature.

A minimum of ten courses is required for Track I. Required courses are ENGL 217; 220;

221; two courses from 222, 223, 227; two courses selected from ENGL 311, 312, 313, 314, and 315; one from ENGL 335 and 336; and two electives from among courses numbered 215 and above.

Students who wish to earn secondary teacher certification must complete a minimum of twelve courses in English. Required courses in English are 217; 220; 221; two courses from 222, 223, 227; 335; 336; 338; three courses selected from 311, 312, 313, 314, and 315; and one elective from among courses numbered 215 and above. Required courses outside English are EDUC 200, 446, 447, and 449; PSY 110 and 138; and THEA 100.

Students who intend to pursue graduate study in British or American literature should complete the twelve English courses specified for secondary certification and, as part of that sequence, take ENGL 449, Advanced Criticism, as their English elective.

Track II - English Major in Creative Writing

This track is designed for students who aspire to careers as professional writers, as editors, and as publishers; for students who plan to continue studies in an M.F.A. or M.A. program; or for students who would like to discover their creative potential while pursuing a fundamental liberal arts education.

A minimum of ten courses is required for Track II. Required courses are ENGL 240; two courses selected from ENGL 220, 221, 222, 223, 225, and 227; two from ENGL 311, 312, 313, 314 and 315; one from ENGL 331 or 332; one from ENGL 335 and 336; two from ENGL 341, 342, 441, and 442 (note prerequisites); and one from ENGL 411 or 412.

Students who wish to earn secondary teacher certification must complete a minimum of twelve courses in English. Required courses are ENGL 240; two courses selected from ENGL 220, 221, 222, 223, 225, and 227; two from 311, 312, 313, 314, and 315; one from 331 and 332; 335, 336, 338; two from 341, 342, 441, 442 and one from 411 and 412. Required courses outside English are EDUC 200, 446,

447, and 449; PSY 110 and 138; and THEA 100.

The following course has been approved to be offered as a cultural diversity course:

ENGL 334. Students must check semester class schedules to determine which courses are offered as "D" courses for that semester.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: ENGL 225, 311, 331, 334, 335, 336, 420. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minors

The department offers two minors in English:

Literature: Five courses in literature at the 200 level or above, at least three of which must be numbered 300 or above.

Writing: Five courses, four of which are chosen from ENGL 217, 240, 321, 322, and 338; plus one writing-intensive course in literature at the 300 level.

05

INTRODUCTION TO COLLEGE WRITING

A review of grammar and an introduction to college-level reading and writing. One unit grade of "P" will be assigned when the student has successfully completed all of the work in the course. Required of, and limited to, those who have not been exempted from ENGL 105.

06

COMPOSITION

Extensive practice in analytical writing. Special emphasis on developing the composition skills needed to articulate and defend a position in various situations requiring the use of written English. Credit may not be earned for both 106 and 107.

07

HONORS COMPOSITION

Extensive practice in analytical writing. Special emphasis on developing the writing skills of students who have the potential to

benefit from advanced work. *Placement by examination only. Credit may not be earned for both 106 and 107.*

215

INTRODUCTION TO LITERARY INTERPRETATION

Practice in the methods of close reading and formal analysis. Identification of primary elements and structures of literary representation. Literature chosen for study will vary. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

217

CRITICAL WRITING SEMINAR

Brief introduction to criticism as a discipline, followed by workshop training in writing critical papers on the major literary genres. *Prerequisite: Grade of C+ or better in ENGL 106 or 107, or consent of instructor.*

220

BRITISH LITERATURE I

Literary forms, themes, and authors from the Anglo-Saxon period through the 18th century. Emphasis on such writers as Chaucer, Spenser, Shakespeare, Milton, Swift, Pope, and Johnson; representative works from *Beowulf* to Burney's *Evelina*. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

221

BRITISH LITERATURE II

Literary movements and authors from the beginnings of Romanticism to the end of the 19th century. Particular emphasis on such writers as Wordsworth, Shelley, Keats, Tennyson, Browning, Carlyle, Arnold, Hardy, and Yeats. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

222

AMERICAN LITERATURE I

Survey of American literature from the beginning to 1865, with major emphasis on the writers of the Romantic period: Poe, Emerson, Thoreau, Hawthorne, Melville, Dickinson, and Whitman. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

223**AMERICAN LITERATURE II**

Survey of American literature from 1865 to 1945, emphasizing such authors as Twain, James, Crane, Hemingway, Faulkner, Frost, Eliot, Stevens, O'Neill, and Williams. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

225**CLASSICAL LITERATURE**

A study, in translation, of Greek and Roman works that have influenced Western writers. Literary forms studied include epic, drama, satire, and love poetry. Writers studied include Homer, Aeschylus, Sophocles, Euripides, Virgil, Juvenal, Horace, Lucretius, and Ovid. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

227**AMERICAN LITERATURE III**

Survey of American literature from 1945 to the present, focusing on such writers as Bellow, O'Connor, Updike, Roth, Morrison, Bishop, Lowell, Ginsberg, and Plath. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

240**INTRODUCTION TO CREATIVE WRITING**

Workshop discussions, structured exercises, and readings in contemporary literature to provide practice and basic instruction in the writing and evaluation of poetry and fiction. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

311**MEDIEVAL LITERATURE**

Readings in Old and Middle English poetry and prose from Bede's *Ecclesiastical History* to Malory's Arthurian romance. Study of lyric, narrative, drama, and romance with emphasis on the cultural context from which these forms emerge. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

312**RENAISSANCE LITERATURE**

An examination of themes and literary forms of the Renaissance. Authors studied will include

Donne, Marlowe, More, Shakespeare, Sidney, Spenser, and Surrey. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

313**RESTORATION AND 18TH-CENTURY LITERATURE**

Consideration of selected themes, writers, or modes of Restoration and 18th-century literature (1660-1800) with emphasis on the social, political, and intellectual life of that era. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

314**ROMANTIC LITERATURE**

Concentrated study in the writers, texts, and themes of the Romantic period (1789-1832) with emphasis on the social, political, and intellectual life of that era. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

315**VICTORIAN LITERATURE**

Concentrated study in the writers, texts, and themes of the Victorian period (1832-1901) with emphasis on the social, political, and intellectual life of that era. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

321**ADVANCED WRITING: TECHNICAL AND PROFESSIONAL**

A course providing practice in report and technical writing, proposals, and other areas where competence will be expected in the business and scientific worlds. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

322**ADVANCED WRITING: THE CREATIVE ESSAY**

A course in which students from all disciplines learn to explore and define themselves through the essay, a form used to express the universal through the particular and the personal. Readings will include

essayists from Montaigne to Gould. *Prerequisite: Grade of C+ or better in ENGL 106 or 107, or consent of instructor. Alternate years.*

331**20TH-CENTURY FICTION**

Examination of the novels and short fiction of such major writers as Conrad, Woolf, Joyce, Faulkner, Fowles, and Nabokov, with special emphasis on the relationship of their works to concepts of modernism. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

332**20TH-CENTURY POETRY**

Studies in the themes and visions of modern and contemporary poets including Yeats, Frost, Stevens, Williams, Pound, Moore, Eliot, Hughes, Roethke, Bishop, Berryman, Lowell, Larkin, Ginsberg, Sexton, Rich, Plath, Baraka, Heaney, and Dove. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

333**THE NOVEL**

An examination primarily of British and American works from the 18th century to the present, focusing on the novel's ability—since its explosive inception—to redefine its own boundaries. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

334**WOMEN IN LITERATURE**

An examination—literary, social, and historical—of literature by women representing diverse cultures. Each course will examine a particular theme significant to women writers from more than one cultural background. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

335**CHAUCER**

A study of the major works with emphasis on *The Canterbury Tales* and *Troilus and Criseyde*. Some attention to language study

and to the traditions out of which Chaucer's works arose. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

336**SHAKESPEARE**

A study of representative plays in the context of Shakespeare's life and times. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

338**LINGUISTICS**

An intensive look at the English language, focusing on three grammatical systems (traditional, structural, transformational) to identify their strengths and weaknesses. Attention is also given to larger issues, including language change, the politics of language, the creation of meaning, language acquisition, and dialects. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

341**POETRY WORKSHOP I**

An intermediate workshop focusing on the writing of poetry and methods of analysis. *Prerequisite: Grade of B or better in ENGL 240 or consent of instructor.*

342**FICTION WORKSHOP I**

An intermediate course in the writing of short fiction in a workshop environment, where the student is trained to hear language at work. Emphasis on characterization and story. *Prerequisite: Grade of B or better in ENGL 240 or consent of instructor.*

411**FORM AND THEORY: POETRY**

Principles of meter, rhyme, formal structure, and traditional and contemporary poetic forms will be studied through readings, discussion, and exercises. Designed to enhance skills in both practical criticism and in creative writing, this course will pay particular attention to theories

concerned with the relationship between form and content in poetry. *Prerequisite: ENGL 341 or consent of instructor. Alternate years.*

412**FORM AND THEORY: FICTION**

A course that examines philosophical and aesthetic theories of fiction, and the resulting fiction based on those theories. Authors will most likely include Aristotle, Calvino, Gardner, Gass, and Nabokov. *Prerequisite: ENGL 342 or consent of instructor. Alternate years.*

420**SELECTED WRITERS**

An intensive study of no more than three writers, selected on the basis of student and faculty interest. Possible combinations include: Frost, Hemingway, and Faulkner; O'Connor, Welty, and Porter; Spenser and Milton; Hawthorne, Melville, and Dickens; Woolf, Forster, and Lawrence; Joyce and Yeats. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

421**TOPICS IN LITERATURE**

Examination of a literary theme, idea, or movement as it appears in one or more types of literature and as it cuts across various epochs. Possible topics include: American Novelists and Poets of the Jazz Age and Depression; The Bible and Literature; Gothic Tradition in American Literature; Mystery and Detective Fiction; The Hero in Literature. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

441**POETRY WORKSHOP II**

An advanced workshop in the writing of poetry. Students will receive intensive analysis of their own work and acquire experience in evaluating the work of their peers. *Prerequisite: ENGL 341.*

442**FICTION WORKSHOP II**

An advanced course in the writing of short fiction. Emphasis on the complexities of voice and tone. The student will be encouraged to develop and control his or her individual style and produce publishable fiction. *Prerequisite: ENGL 342.*

449**ADVANCED CRITICISM**

Reading and discussion in the theory and history of criticism. Examination of both traditional and contemporary ideas about the value and nature of literary expression and its place in human culture generally. Work in the course includes practical as well as theoretical use of the ideas and methods of critical inquiry. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

470-479**INTERNSHIP (See index)**

The department provides internships in editing, legal work, publishing, and technical writing.

N80-N89**INDEPENDENT STUDY (See index)**

Recent studies include the role of Pennsylvania in the fiction of John O'Hara; the changing image of women in American art and literature (1890-1945); the hard-boiled detective novel; contemporary women writers; and Milton's use of the Bible in *Paradise Lost*.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

Recent projects include "The Function of the Past in the Fiction of William Faulkner" and "Illusion, Order, and Art in the Novels of Virginia Woolf."



FOREIGN LANGUAGES AND LITERATURES

Professor: MacKenzie

Associate Professor: Buedel (Chairperson)

Assistant Professors: Heysel, Kingery, Watts

Part-time Instructors: Boring, Cartal-Falk

Study of foreign languages and literatures offers opportunity to explore broadly the varieties of human experience and thought. It contributes both to personal and to international understanding by providing competence in a foreign language and a critical acquaintance with the literature and culture of foreign peoples. A major can serve as a gateway to careers in business, government, publishing, education, journalism, social agencies, translating, and writing. It prepares for graduate work in literature or linguistics and the international fields of politics, business, law, health, and area studies.

MAJOR FIELDS OF STUDY

French, German, and Spanish are offered as major fields of study. The major consists of at least 32 semester hours of courses numbered 111 and above. Students who intend to pursue graduate study in a foreign language should take additional 400-level hours in literature. Majors seeking teacher certification are advised to begin the study of a second foreign language.

The department encourages students to consider allied courses from related fields or a second major, and also individual or established interdisciplinary majors combining interest in several literatures or area or cross-cultural studies; for example, International Studies, 20th Century Studies, the Major in Literature.

STUDY ABROAD AND INTERNSHIPS

The department recommends that language majors study in a department-approved program for a semester or more as part of their major.

Approved programs are available in Austria (the Institute for the International Education of Students), France (Boston University, the Institute for the International Education of Students), Germany (the Goethe Institute, the Institute for the International Education of Students), Mexico (Cemanahuac Educational Community), and Spain (Tandem Escuela Internacional, the Center for Cross-Cultural Studies, Indiana University of PA). Interested students should begin planning with their major advisor by the first week of the semester prior to departure. To qualify, students must have sophomore standing or better, an overall GPA of 2.50, and a GPA of 3.00 in language courses. Other qualifications include recommendation from faculty in the major and completion of specific courses in language, literature, or culture. In addition, the department offers overseas internships through the approved programs. They typically require substantial language skills and junior or senior standing.

CAPSTONE EXPERIENCE

All foreign language majors are required to pass two semesters of FLL 449 (Junior-Senior Colloquium). In addition, all majors must complete at least two of the following six options: (1) appropriate study abroad for a minimum of 6 weeks; (2) an internship; (3) department-approved volunteer work or tutoring in the foreign language; (4) FRN 441, GERM 418, or SPAN 418 with a grade of C or better; (5) secondary teaching certification in French, German, or Spanish; (6) a Praxis test in French,

German, or Spanish passed with a score approved by the department.

If the colloquia and other two requirements have not been met by the end of the first semester of the senior year, the student must submit to the chair of the department a plan signed by the advisor showing when and how these requirements will be completed.

TEACHER CERTIFICATION

Students interested in teacher certification should refer to the Department of Education on page 96.

FOREIGN LANGUAGES AND LITERATURES (FLL)

225

CONTINENTAL LITERATURE

A study of such major continental authors as Cervantes, Dostoevsky, Chekhov, Dante. Ibsen, Proust, Gide, Kafka, Hesse, Goethe, Sartre, Camus, Brecht, and Ionesco. Works read in English translation will vary and be organized around a different theme or topic; recent topics have been existentialism, modernism, drama, the Weimar era, and 20th century Scandinavian and German prose writers.

Prerequisite: None. Taught in English. May be repeated for credit with consent of instructor. May be accepted toward the English major with consent of the Department of English.

338

FOREIGN LANGUAGE: SYSTEMS AND PROCESS

Study of basic linguistic concepts as a tool for language learning and teaching. Discussion and application of language teaching techniques, including work in the language laboratory. Designed for future teachers of one or more languages and normally taken in the junior year. Students should arrange through the Department of Education to fulfill the requirements of a participation experience in area schools in the same semester. *Prerequisite: Consent of instructor. Taught in English. Does not count toward majors in French, German, and Spanish.*

449

JUNIOR-SENIOR COLLOQUIUM

This colloquium offers French, German, and Spanish majors the opportunity to meet regularly with peers, professors, and invited guest speakers to discuss linguistic, literary, cultural, and pedagogical topics. Each student enrolled in 449 is required to deliver at least one oral presentation per semester. *Prerequisite: junior standing. The department recommends that, when possible, students take one semester of 449 during their junior year and another semester during their senior year.*

Taught in English. The Colloquium will meet a minimum of 6 times during the semester for 1 hour each session. After successful completion of two semesters of the Colloquium, a student may enroll for additional semesters on a pass-fail basis and no oral presentation will be required. Non-credit course.

FRENCH (FRN)

Major

A major consists of a minimum of 32 semester hours of FRN courses numbered 111 and above or approved courses from a Study Abroad program, including at least eight semester hours from 402, 412 and 427. French majors must pass at least two semesters of FLL 449 and complete two of the additional requirements as explained under Capstone Experience on page 105. Students who wish to be certified for secondary teaching must complete the major with at least a 3.00 GPA and pass FRN 221-222, 228, 418, and FLL 338 (the latter course with a grade of B or better).

FRN 228 satisfies the cultural diversity requirement. FRN 222, when scheduled as a W course, counts toward the writing intensive requirement.

Minor

A minor in French consists of at least 16 semester hours of courses numbered 221 and above. Courses 111 and 112 may be counted towards the minor, but then the minor must

consist of at least 20 semester hours of courses, 12 hours of which must be numbered 200 or above.

101-102**ELEMENTARY FRENCH**

The aim of this sequence of courses is to acquire the fundamentals of the language with a view to using them. Regular practice in speaking, understanding, and reading.

111-112**INTERMEDIATE FRENCH**

Review and development of the fundamentals of the language for immediate use in speaking, understanding, and reading, with a view to building confidence in self-expression. *Prerequisite: FRN 102 or equivalent.*

221-222**FRENCH LANGUAGE PRACTICE**

Further training in speaking, listening comprehension, reading, and writing. Includes extensive work in grammar. *Prerequisite: FRN 112 or equivalent.*

228**MODERN FRANCE**

A course designed to familiarize students with political and social structures and cultural attitudes in contemporary French society. Material studied may include such documents as newspaper articles, interviews and sociological surveys, and readings in history, religion, anthropology, and the arts. Some attention to the changing education system and the family and to events and ideas which have shaped French society. May include some comparative study of France and the United States. *Prerequisite: FRN 221 or consent of instructor.*

321**SPECIAL TOPICS OR AUTHORS IN LITERATURE**

Examination of significant cultural or literary topics concerning the French-speaking world. Possible topics or genres include: Francophone short stories; modern French theatre; French-speaking women writers; French and Francophone poetry; Paris and the

Avant-garde. *Prerequisite: FRN 221 or consent of the instructor. May be repeated for credit with consent of instructor.*

402**FRENCH LITERATURE TO 1800**

Major authors and movements from the Medieval, Renaissance, Classical and Enlightenment periods. Includes the *chanson de geste*, Villon, Montaigne, Corneille, Racine, Molière, Voltaire, and Rousseau. *Prerequisite: FRN 222 or 228, or consent of instructor. Alternate years.*

412**FRENCH LITERATURE OF THE 19TH CENTURY**

The dimensions of the Romantic sensibility: Musset, Hugo, Vigny, Balzac, Stendhal. Realism and Naturalism in the novels of Flaubert and Zola. Reaction in the poetry of Baudelaire, Rimbaud, Verlaine, and Mallarmé. *Prerequisite: FRN 222 or 228, or consent of instructor. Alternate years.*

418**ADVANCED LANGUAGE PRACTICE**

Intensive practice for advanced students who wish to improve further their spoken and written French. Includes work in oral comprehension, phonetics, pronunciation, oral and written composition, and translation.

Prerequisite: One course from FRN 402, 412, 423, 427; or consent of instructor.

427**FRENCH LITERATURE OF THE 20TH CENTURY**

Representative poets and novelists of modern France. Readings selected from the works of authors such as Proust, Gide, Aragon, Giono, Mauriac, Céline, Malraux, Saint-Exupéry, Camus, the "new novelists" (Robbe-Grillet, Butor, Sarraute, Le Clézio), and the poetry of Apollinaire, Valéry, the Surrealists (Breton, Reverdy, Eluard, Char), Saint-John Perse, Supervielle, Prévert, and others. Some attention to works of French-speaking African writers. *Prerequisite: FRN 222 or 228, or consent of instructor. Alternate years.*

470-479

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

Examples of recent studies in French include translation, Existentialism, the classical period, enlightenment literature, and Saint-Exupery.

490-491INDEPENDENT STUDY FOR
DEPARTMENTAL HONORS (See index)**GERMAN (GERM)****Major**

A major consists of a minimum of 32 semester hours of GERM courses numbered 111 and above or approved courses from a Study Abroad program. One unit of FLL 225 may be included in the major with permission. GERM 431 or 441 is required of all majors. German majors must pass at least two semesters of FLL 449 and complete two of the additional requirements as explained under Capstone Experience on page 105.

Students who wish to be certified for secondary teaching must complete the major with at least a 3.00 GPA and pass GERM 221-222, 323, 325, 418, and either 431 or 441. In addition to the 32 semester hours of courses for the major. In addition to the 32 semester hours of courses for the major they must also pass FLL 338 with a grade of B or better. All majors are urged to enroll in HIST 416, MUS 336, PSCI 221, and THEA 335.

GERM 221 and 222 satisfy the cultural diversity requirement. GERM 431 and 441, when scheduled as W courses, count toward the writing intensive requirement.

Minor

A minor in German consists of at least 16 semester hours of courses numbered 221 and above. Courses 111 and 112 may be counted toward the minor, but then the minor must consist of at least 20 semester hours of courses, 12 hours of which must be numbered 200 or above. One unit of FLL 225 may be included in the minor with permission.

101-102

ELEMENTARY GERMAN

The aim of this sequence of courses is to acquire the fundamentals of the language with a view to using them. Regular practice in speaking, understanding, and reading.

111-112

INTERMEDIATE GERMAN

This sequence of courses reviews and develops the fundamentals of the language for immediate use in speaking, understanding, and reading with a view to building confidence in self-expression. *Prerequisite: GERM 102 or equivalent.*

221-222COMPREHENSIVE REVIEW
AND LANGUAGE PRACTICE

This sequence of courses is designed to review and develop skills in speaking, listening, writing and reading. Grammar and vocabulary building are stressed with intensive review, writing practice and some reading on contemporary issues in German-speaking countries. *Prerequisite: GERM 112 or equivalent.*

323SURVEY OF GERMAN
LITERATURE AND CIVILIZATION I

Designed to acquaint the student with important periods of German literature, representative authors, and major cultural developments in Germany, Austria, and Switzerland. The course deals with literature and culture from the Early Middle Ages through the 18th century. *Prerequisite: GERM 222 or consent of instructor.*

325SURVEY OF GERMAN
LITERATURE AND CIVILIZATION II

Designed to acquaint the student with important periods of German literature, representative authors, and major cultural developments in Germany, Austria, and Switzerland. The course deals with literature and culture from the 19th century through the 1960's. *Prerequisite: GERM 222 or consent of instructor.*

411**THE NOVELLE**

The German Novelle as a genre relating to various literary periods. *Prerequisite: GERM 323 or 325, or consent of instructor.*

418**ADVANCED LANGUAGE PRACTICE**

Intensive practice for advanced students who want to improve their spoken and written German. Includes work in oral comprehension, phonetics, pronunciation, oral and written composition, translation, and the development of the language and its relationship to English. *Prerequisite: GERM 222 or consent of instructor.*

421**GERMAN POETRY**

A study of selected poets or the poetry of various literary periods. Possible topics include: Romantic poetry, Heine, Rilke, and selected contemporary poets. *Prerequisite: GERM 323 or 325, or consent of instructor.*

431**GOETHE**

A study of the life and works of Goethe. Goethe's significance in the Classical period and later. Readings in the major works. *Prerequisite: GERM 323 or 325, or consent of instructor.*

441**CONTEMPORARY GERMAN LITERATURE**

Representative poets, novelists and dramatists of contemporary Germany, Switzerland and Austria covering the period from the 1960's to the present. Readings selected from writers such as: Böll, Brecht, Frisch, Dürrenmatt, Bichsel, Handke, Walser, Grass, Becker, and others. *Prerequisite: GERM 323 or 325, or consent of instructor.*

470-479**INTERNSHIP (See index)****N80-N89****INDEPENDENT STUDY (See index)**

Examples of recent studies in German include Classicism, Germanic Mythology, Hermann Hesse, the dramas of Frisch and Dürrenmatt.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)****GREEK (GRK) SEE RELIGION****HEBREW (HEBR) SEE RELIGION****SPANISH (SPAN)****Major**

A major consists of 32 semester hours of SPAN courses numbered 111 and above or approved courses from a Study Abroad program. One course must focus on literature from Spain and one course must focus on literature from Spanish America. Eight semester hours must be at the 400 level, not including 449. Spanish majors must pass at least two semesters of FLL 449 and complete two of the additional requirements as explained under Capstone Experience on page 105. Students who wish to be certified for secondary teaching must complete the major with at least a 3.00 GPA and pass SPAN 221, 222, 311, 418, and FLL 338 (the latter with a grade of B or better).

SPAN 221, 222, and 311 satisfy the cultural diversity requirement. SPAN 323, 325, 418, and 424, when scheduled as W courses, count toward the writing intensive requirement.

Minor

A minor in Spanish consists of at least 16 semester hours of courses numbered 221 or above. Courses 111 and 112 may be counted toward the minor, but then the minor must consist of at least 20 semester hours of courses, 12 hours of which must be numbered 200 or above.

101-102**ELEMENTARY SPANISH**

The aim of this sequence of courses is to acquire the fundamentals of the language with a view to using them. Regular practice in speaking, understanding, and reading.

111-112**INTERMEDIATE SPANISH**

This sequence of courses reviews and develops the fundamentals of the language for immediate use in speaking, understanding, reading and writing with a view to building

confidence in self-expression. *Prerequisite: SPAN 102 or equivalent.*

221-222 CONVERSATION, REVIEW, AND COMPOSITION

Intensive discussion and writing on a variety of subjects in conjunction with contemporary readings. Includes in-depth grammar review. Designed to provide greater breadth and fluency in spoken and written Spanish. *Prerequisite: SPAN 112 or equivalent.*

311 HISPANIC CULTURE

To introduce students to Spanish-speaking peoples—their values, customs and institutions, with reference to the geographic and historical forces governing present-day Spain and Spanish America. *Prerequisite: SPAN 222 or consent of instructor. Alternate years.*

321 SPECIAL TOPICS OR AUTHORS IN LITERATURE

Examination of significant cultural or literary topics concerning the Spanish-speaking world. Possible topics or genres include: Latin American short stories; modern Spanish theatre; Latin American women writers; Chicano literature. *Prerequisite: SPAN 222 or consent of the instructor. May be repeated for credit with consent of instructor.*

323 SURVEY OF SPANISH LITERATURE AND CIVILIZATION

Designed to acquaint the student with important periods of Spanish literature, representative authors, and major socio-economic developments. The course deals with the literature from the Middle Ages to the present. *Prerequisite: SPAN 222 or consent of instructor. Alternate years.*

325 SURVEY OF SPANISH-AMERICAN LITERATURE AND CIVILIZATION

Designed to acquaint the student with important periods of Spanish-American literature, representative authors, and major socio-economic developments. The course

deals with the literature, especially the essay and poetry, from the 16th century to the present. *Prerequisite: SPAN 222 or consent of instructor. Alternate years.*

418 ADVANCED LANGUAGE PRACTICE

Intensive practice for advanced students who wish to improve their spoken and written Spanish. Includes work in oral comprehension, pronunciation, oral and written composition, and translation. *Prerequisite: One SPAN course at the 300 level or consent of instructor. Alternate years.*

424 SPANISH LITERATURE OF THE GOLDEN AGE

A study of representative works and principal literary figures in the poetry, prose, and drama of the 16th and 17th centuries. *Prerequisite: SPAN 323 and 325, or consent of instructor.*

426 SPECIAL TOPICS IN MODERN HISPANIC LITERATURE

Readings of important works in modern Spanish and/or Latin American literature. Reading selections may focus on a particular genre or they may be a combination of drama, poetry and prose. Possible topics include: Romanticism and realism in Spain and Latin America; the Modernist movement in Latin America; 20th century poetry; Lorca and the avant-garde; the Latin American novel; the literature of post-Franco Spain. *Prerequisite: two Spanish courses at the 300 level, or consent of instructor. May be repeated for credit with consent of instructor.*

470-479 INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

Recent studies include literary, linguistic, and cultural topics and themes such as urban problems as reflected in the modern novel.

490-491 INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)



HISTORY (HIST)

Professors: Larson (Chairperson), Morris, Piper

Assistant Professor: Witwer

A major consists of 10 courses, including HIST 110, 111, and 449. At least seven courses must be taken in the department. The following courses may be counted toward fulfilling the major requirements: AMST 200, PSCI 221 and 439, REL 226 and 228. Other appropriate courses outside the department may be counted upon departmental approval. For history majors who student teach in history, the major consists of nine courses. In addition to the courses listed below, special courses, independent study, and honors are available. Special courses recently taught and anticipated include a biographical study of European Monarchs, the European Left, the Industrialization and Urbanization of Modern Europe, Utopian Movements in America, the Peace Movement in America, The Vietnam War, and American Legal History. History majors are encouraged to participate in the internship program.

Students interested in teacher certification should refer to the Department of Education on page 95.

The following courses have been approved to be offered as cultural diversity courses and may be offered as such: HIST 120, 140, 220, 230, 240. Students must check semester class schedules to determine which courses are offered as "D" courses for that semester.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: HIST 218, 230, 247, 332, 335, 443, 449. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

Three minors are offered by the Department of History. The following courses are required to complete a minor in American history: HIST 125, 126, and three courses in American history numbered 200 and above (HIST 120 and/or 310 may be substituted.) A minor in European history requires the completion of HIST 110, 111 and three courses in European history numbered 200 and above. To obtain a minor in History (without national or geographical designation), a student must complete six courses in history, of which three must be chosen from HIST 110, 111, 125, and 126 and three must be history courses numbered 200 and above.

110

EUROPE 1500-1815

An examination of the political, social, cultural, and intellectual history of Europe and its relations with other areas of the world from 1500 to 1815.

111

EUROPE 1815-PRESENT

An examination of the political, social, cultural, and intellectual history of Europe and its relations with other areas of the world from 1815 to the present.

120

LATIN AMERICAN HISTORY

An examination of the native civilization, the age of discovery and conquest, Spanish colonial policy, the independence movements, and the development of modern institutions and governments in Latin America. *Alternate years.*

125

UNITED STATES HISTORY 1601-1877

A study of the men, measures, and move-

ments which have been significant in the development of the United States between 1607 and 1877. Attention is paid to the problems of minority groups as well as to majority and national influences.

126**UNITED STATES HISTORY 1877-PRESENT**

A study of men, measures, and movements which have been significant in the development of the United States since 1877. Attention is paid to the problems of minority groups as well as to majority and national influences.

140**SURVEY OF ASIAN HISTORY**

A comprehensive overview of Asian history with emphasis on those Pacific Rim countries which have greatest current impact on political and economic development in the United States. *Alternate Years.*

210**ANCIENT HISTORY**

A study of the ancient western world, including the foundations of the western tradition in Greece, the emergence and expansion of the Roman state, its experience as a republic, and its transformation into the Empire. The course will focus on the social and intellectual life of Greece and Rome as well as political and economic changes. *Alternate years.*

212**MEDIEVAL EUROPE AND ITS NEIGHBORS**

The history of Europe from the dissolution of the Roman Empire to the mid-15th century. The course will deal with the growing estrangement of western Catholic Europe from Byzantium and Islam, culminating in the Crusades; the rise of the Islamic Empire and its later fragmentation; the development and growth of feudalism; the conflict of empire and papacy, and the rise of the towns. *Alternate years.*

215**CONFLICT IN WESTERN CIVILIZATION**

An in-depth study of the changing nature

of war and its relationship to the development of Western Civilization since the end of the Middle Ages. Particular emphasis will be placed on the role of war in the development of the modern nation state and the origins and nature of total war. *Alternate years.*

218**EUROPE IN THE ERA OF THE WORLD WARS**

An intensive study of the political, economic, social, and cultural history of Europe from 1900-1945. Topics include the rise of irrationalism, the origins of the First World War, the Communist and Fascist Revolutions, and the attempts to preserve peace before 1939. *Prerequisite: HIST 111 or consent of instructor. Alternate years.*

219**CONTEMPORARY EUROPE**

An intensive study of the political, economic, social, and cultural history of Europe since 1945. Topics include the post-war economic recovery of Europe, the Sovietization of Eastern Europe, the origins of the Cold War, decolonization, and the flowering of the welfare state. *Prerequisite: HIST 111 or consent of instructor.*

220**WOMEN IN HISTORY**

An examination of the social, political, economic and intellectual experience of women in the Western World from ancient times to the present.

226**COLONIAL AMERICA AND THE REVOLUTIONARY ERA**

The establishment of British settlements on the American continent, their history as colonies, the causes and events of the American Revolution, the critical period following independence, and proposal and adoption of the United States Constitution. *Alternate years.*

230**AFRO-AMERICAN HISTORY**

A study of the experiences and participation of Afro-Americans in the United States. The course includes historical experiences such as

slavery, abolition, reconstruction, and urbanization. It also raises the issue of the development and growth of white racism, and the effect of this racism on contemporary Afro-American social, intellectual, and political life.

Alternate years.

240

MODERN CHINA

This course will explore the social, political and cultural changes in China since the early 19th Century. Particular attention will be given to the Communist Revolution and the developments in China since Mao's death. *Alternate years.*

247

ORGANIZED CRIME IN AMERICA

A history of organized crime in America from the Gilded Age to the present. This course explores the rise of organized crime and its ties to the urban political machines as well as the segregated vice districts of Nineteenth Century America. Students study the rise of the Mafia in the Twentieth Century along with other ethnically based criminal groups. Much of the course centers on the role that organized crime has played in American society through such activities as labor racketeering, organized gambling, and smuggling. The course also explores different law enforcement efforts mounted against organized crime over time, culminating with the most recent use of broad conspiracy laws. *Alternate years.*

320

DIPLOMATIC HISTORY OF EUROPE SINCE 1789

A survey of the development of the European-states system and the relations between the European states since the beginning of the French Revolution. *Prerequisite: HIST 111 or consent of instructor. Alternate years.*

322

THE CRISIS OF LIBERALISM AND NATIONALISM: EUROPE 1848-1870

An in-depth investigation of the crucial "Middle Years" of 19th century Europe from

the revolutions of 1848 through the unification of Germany. The course centers on the struggles for power within the major states of Europe at this time, and how the vehicle of nationalism was used to bring about one type of solution. *Alternate years.*

328

AGE OF JEFFERSON AND JACKSON

The theme of the course is the emergence of the political and social characteristics that shaped modern America. The personalities of Thomas Jefferson, John Marshall, John Randolph, Aaron Burr, and Andrew Jackson receive special attention. Special consideration is given to the first and second party systems, the decline in community cohesiveness, the westward movement, and the growing importance of the family as a unit of social organization. *Alternate years.*

330

FRENCH REVOLUTION AND NAPOLEON

An analysis of the political, social, and intellectual background of the French Revolution, a survey of the course of revolutionary development, and an estimate of the results of the Napoleonic conquests and administration. *Prerequisite: HIST 110 or consent of instructor. Alternate years.*

332

CIVIL WAR AND RECONSTRUCTION

The problems and events leading to war, the political and military history of the war, and the bitter aftermath to the Compromise of 1877.

335

U.S. SINCE 1945

A survey of the political, social, and intellectual developments in America in the years following World War II. The course reviews both foreign policy developments in those years and the various social movements that swept across the country, including civil rights, feminism, the counter-culture, and conservatism. *Prerequisite: HIST 126 or consent of instructor.*

340**20TH CENTURY UNITED STATES RELIGION**

The study of historical and cultural developments in American society which relate to religion or what is commonly called religion. This involves consideration of the institutional and intellectual development of several faith groups as well as discussion of certain problems, such as the persistence of religious bigotry and the changing modes of church-state relationships. *Alternate years.*

416**HISTORY OF REFORMATION THOUGHT**

A study of the ideas and systems of ideas propounded prior to the Reformation, but which are historically related to its inception, and of the ideas and systems of ideas involved in the formulation of the major Reformation Protestant traditions, and in the Catholic Reformation. Included are the ideas of the humanists of the Reformation Era. *Alternate years.*

418**HISTORY OF RENAISSANCE THOUGHT**

A study of the classical, humanist, and scholastic elements involved in the development of the Renaissance outlook on views and values, both in Italy and in Northern Europe. The various combinations of social and political circumstances which constitute the historical context of these intellectual developments will be noted. *Alternate years.*

442**UNITED STATES SOCIAL AND INTELLECTUAL HISTORY TO 1877**

A study of the social and intellectual experience of the United States from its colonial antecedents through reconstruction. Among the topics considered are Puritanism, Transcendentalism, community life and organization, education, and social reform movements. *Prerequisites: Two courses from HIST 125, 126, 230; or consent of instructor.*

443**UNITED STATES SOCIAL AND INTELLECTUAL HISTORY SINCE 1877**

A study of the social and intellectual experience of the United States from reconstruction to the present day. Among the topics considered are social Darwinism, pragmatism, community life and organization, education and social reform movements. *Prerequisite: Two courses from HIST 125, 126, 230; or consent of instructor.*

449**HISTORICAL METHODS**

This course focuses on the nature and meaning of history. It will open to the student different historical approaches and will provide the opportunity to explore these approaches in terms of particular topics and periods. Majors are required to enroll in this course in either their junior or senior year. *Prerequisite: One course from HIST 328, 330, 335 or 416.*

470-479**INTERNSHIP (See index)**

Typically, history interns work for local government agencies engaged in historical projects or for the Lycoming County Historical Museum.

N80-N89**INDEPENDENT STUDY (See index)**

Recent topics include studies of the immigration of American blacks, political dissension in the Weimer republic, Indian relations before the American Revolution, and the history of Lycoming County.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**



INSTITUTE FOR MANAGEMENT STUDIES (IMS) AND MANAGEMENT SCHOLARS PROGRAM

Associate Professor: Weaver (Director)

The purpose of the Institute for Management Studies is to enhance the educational opportunities for students majoring or minoring in accounting, business administration, or economics. It does this by offering an expanded internship program, special seminars on important management topics, student involvement in faculty research and professional projects, executive development seminars, and a Management Scholars program for academically talented students (described below). In addition, the IMS hosts guest speakers and conferences on current management issues.

All students who have a declared major or minor in accounting, business administration, or economics and who are in good academic standing are automatically members of the IMS. However, the IMS Director may invite or permit other students to join the IMS who do not meet the first criterion, such as freshmen who have not yet declared a major or minor.

210

MANAGEMENT SCHOLAR SEMINAR

Team-taught interdisciplinary seminar under the direction of the IMS faculty. A different interdisciplinary topic relevant to students in all three IMS departments is offered at least once a year. Completion of two semesters required by the Management Scholars Program. *One-quarter unit of credit. Prerequisite: Membership in the Management Scholars Program or consent of IMS Director. May be repeated for credit.*

340

MANAGEMENT INTERNSHIP STUDY

A practicum in which students work as interns for businesses, government agencies and nonprofit organizations in the Williamsport area and locations in Pennsylvania, New Jersey, New York, Washington, D.C., and other places. Reading, writing and research assignments vary by the credit value of the experience. Enrollments are limited to the numbers of available placements. Most internships are full-time paid positions, although part-time and unpaid positions are occasionally accepted. Four to eight semester hours of credit. *Prerequisite: Membership in the Institute for Management Studies and consent of the Director. May be repeated for a maximum of 16 credits.*

IMS Scholars Program

The IMS sponsors a Management Scholars Program for academically talented students in the three IMS departments. To join the Management Scholars Program, a student must satisfy the following criteria:

- a) Have a declared major or minor in one or more of the IMS departments. However, the IMS Director may invite or permit other students to join the Management Scholars Program who do not meet this criterion, such as freshmen who have not yet declared a major or minor.



b) Have an overall GPA of 3.25 or higher, or exhibit strong academic potential if the student is a first-semester freshman.

To graduate as a Management Scholar, a student must meet the following criteria:

- a) Successfully complete two semester-hours of Management Scholar Seminars.
- b) Successfully complete a major or minor in one of the three IMS departments.
- c) Graduate with a GPA of 3.25 or higher in both overall college work, and within an IMS major and/or minor.
- d) Successfully complete an appropriate internship, practicum or independent study, or complete a special project approved by the IMS Director.

At least one Management Scholar Seminar is taught per academic year on an interdisciplinary topic of relevance to students in all three IMS departments. The seminars are normally offered as one semester-hour courses and do not result in overload charges for full-time students.

Students who are currently Lycoming College Scholars may also become Management Scholars and participate in both programs.

INTERNATIONAL STUDIES (INST)

Professor: Larson (Coordinator)

The major is designed to integrate an understanding of the changing social, political, and historical environment of Europe today with study of Europe in its relations to the rest of the world, particularly the United States. It stresses the international relations of the North Atlantic community and offers the student opportunity to emphasize either European studies or international relations. The program provides multiple perspectives on the cultural traits that shape popular attitudes and institutions. Study of a single country is included as a data-base for comparisons, and study of its language as a basis for direct communication with its people.

The program is intended to prepare a student either for graduate study or for careers which have an international component. International obligations are increasingly assumed by gov-

overnment agencies and a wide range of business, social, religious, and educational organizations. Opportunities are found in the fields of journalism, publishing, communications, trade, banking, advertising, management, and tourism. The program also offers flexible career preparation in a variety of essential skills, such as research, data analysis, report writing, language skills, and the awareness necessary for dealing with people and institutions of another culture. Preparation for related careers can be obtained through the guided selection of courses outside the major in the areas of business, economics, foreign languages and literatures, government, history, and international relations or through a second major. Students should design their programs in consultation with members of the Committee on International Studies.

Students interested in teacher certification should refer to the Department of Education on page 90. By completing a major in the foreign languages (five or more courses) and the education program, students can be certified to teach that language.

The International Studies program also encourages participation in study abroad programs such as programs at Westminster College in Oxford, England, as well as the Washington and United Nations semesters.



The following course has been approved to be offered as a writing intensive course and may be offered as such: INST 449. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

The major consists of 11 courses including INST 449 plus the following:

International Relations Courses - Four or two courses (if two, then four must be taken from Area Courses). Courses within this group are designed to provide a basic understanding of the international system and of Europe's relations with the rest of the world. PSCI 225 is required.

PSCI 225	International Relations
ECON 343	International Trade
HIST 320	European Diplomatic History
PSCI 439	American Foreign Policy

Area Courses - Four or two courses (if two, then four must be taken from International Relations Courses). Courses within this group are designed to provide a basic understanding of the European political, social, and economic environment. HIST 111 and ECON 240 are required.

HIST 111	Europe 1815-Present
ECON 240	Economic Geography
PSCI 221	Comparative Politics and Geography
HIST 218	Europe in the Era of the World Wars
HIST 219	Contemporary Europe

National Courses

Language - Two courses in one language.
FRN 221, plus one course numbered 222 or above (except 228)
GERM 221, plus one course numbered 222 or above
SPAN 221, plus one course numbered 222 or above (except 311)



LITERATURE (LIT)

This major recognizes literature as a distinct discipline beyond national boundaries and combines the study of any two literatures in the areas of English, French, German, and Spanish. Students can thus explore two literatures widely and intensively at the upper levels of course offerings within each of the respective departments while developing and applying skills in foreign languages. The major prepares students for graduate study in either of the two literatures studied or in comparative literature.

The major requires at least six literature courses, equally divided between the two literatures concerned. The six must be at the advanced level as determined in consultation with advisors (normally courses numbered 200 and above in English and 400 and above in foreign languages). In general, two of the advanced courses in each literature should be period courses. The third course, taken either as a regular course or an independent study, may have as its subject another period, a particular author, genre, or literary theme, or some other unifying approach or idea. Beyond these six, the major must include at least two additional courses from among those counting toward a major in the departments involved. Any prerequisite courses in the respective departments (for example: ENGL 106, FRN 221-222 or 228, GERM 221-222, SPAN 221-222) should be taken during the freshman year. Students should design their programs in consultation with a faculty member from each of the literatures concerned. Programs for the major must be approved by the departments involved.

Country - One course. The student must select, according to his or her language preparation, one European country which will serve as a social interest area throughout the program. The country selected will serve as the base for individual projects in the major courses wherever possible.

France	FRN 228	Modern France
Germany	HIST N80	Topics in German History
Spain	SPAN 311	Hispanic Culture

Elective Course - One course which should involve further study of some aspect of the program. Appropriate courses are any area or international relations courses not yet taken; HIST 110, 215; PSCI 327; related foreign literature courses counting toward the fine arts requirement and internships.

449

SENIOR SEMINAR

A one-semester seminar, taken in the senior year, in which students and several faculty members will pursue an integrative topic in the field of international studies. Students will work to some extent independently. Guest speakers will be invited. The seminar will be open to qualified persons from outside the major and the College. *Prerequisite: Consent of instructor.*



MATHEMATICAL SCIENCES

Associate Professors: Haley,
Sprechini (Chairperson), Weida

Assistant Professors: deSilva,
Golshan, Peluso

Part-time Instructors: Abercrombie, Collins,
Davis

The Department of Mathematical Sciences offers major and minor programs in computer science and mathematics.

COMPUTER SCIENCE (CPTR)

The B. A. Degree

The B.A. degree in computer science consists of 13 courses: MATH 116; either MATH 109 or 128; one from MATH 112, 129, or 130; CPTR 125, 246, 247, 248, 346, 445, 448, and three other computer science courses numbered 220 or above including approved internships, or MATH 338.

The B.S. Degree

The B.S. degree in computer science consists of 17 courses: MATH 116, 128, 129, and either 214 or 332; CPTR 125, 246, 247, 248, 346, 445, 448; three other computer science courses numbered 220 or above; one of the sequences BIO 110-111, CHEM 110-111, or PHYS 225-226; and one additional course from the

following list of courses: Biology course numbered 110 or above, Chemistry course numbered 110 or above, Physics course numbered 225 or above, or MATH 130, 214, 231, 233, 234, 238, 321, 331, 332.

Students considering graduate work in computer science should take MATH 128, 129 and 130. Recommended extra-departmental course: PHIL 225. In addition to the regular courses listed below, special courses are occasionally available.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: CPTR 246, 247, 346, 448. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in computer science consists of MATH 116, CPTR 125, 246, 247, and two other computer science courses numbered 220 or above.

101

MICROCOMPUTER FILE MANAGEMENT

An introduction to a file-management system, i.e. a database system that uses a single file, in the Windows environment. *One-half unit of credit. This course may not be used to meet distribution requirements.*

108

MATHEMATICAL PROBLEM-SOLVING WITH MICROCOMPUTERS

An introduction to the use of microcomputer-based, integrated software in solving problems from mathematics and related areas. Included are uses of spreadsheet, database and graphics functions to analyze, solve, and display solutions to problems from the areas of number theory, algebra, geometry, statistics, and the mathematics of business and finance. Emphasis is given to the processes involved in mathematical modeling. Laboratory experience is included using current software. *Prerequisite: Credit for or exemption from MATH 100.*

125

INTRODUCTION TO COMPUTER SCIENCE

Introduction to the discipline of computer science with emphasis on programming utilizing a block-structured high-level programming language. Topics include algorithms, program structure, and computer configuration. Laboratory experience is included. *Prerequisite: Credit for or exemption from MATH 100.*

246

PRINCIPLES OF ADVANCED PROGRAMMING

Principles of effective programming, including structured and object oriented programming, stepwise refinement, assertion proving, style, debugging, control structures, decision tables, finite state machines, recursion, and encoding. *Prerequisite: A grade of C- or better in CPTR 125.*

247

DATA STRUCTURES

Representation of data and analysis of algorithms associated with data structures. Topics include representation of lists, trees, graphs and strings, algorithms for searching and sorting. *Prerequisite: A grade of C- or better in CPTR 246 or consent of instructor. Corequisite: MATH 116.*

248

PROGRAMMING LANGUAGE DESIGN

Study of modern programming language design and implementation. Paradigms studied include procedural, functional, logic, and object-oriented. Topics include syntax, semantics, data types, data structures, storage management, and control structures. Laboratory experience is included. *Prerequisite: CPTR 247.*

321

INTRODUCTION TO NUMERICAL ANALYSIS

Topics from the theory of interpolation; numerical approaches to approximation of roots

and functions, integration, systems of differential equations, linear systems, matrix inversion, and the eigenvalue problem. *Prerequisite: CPTR 125 and MATH 129; MATH 130 strongly recommended. Cross-listed as MATH 321.*

324

AUTOMATA, FORMAL LANGUAGES, AND COMPUTABILITY

The study of finite state machines, push-down stacks, and Turing machines along with their equivalent formal language counterparts. Topics covered include results on computability, including results regarding the limits of computers and specific problems that cannot be solved. *Prerequisite: MATH 116 or 234. Cross-listed as MATH 324. Alternate years.*

342

WEB-BASED PROGRAMMING

Intermediate programming on the World Wide Web. Topics covered include client/server issues in Web publishing, Java Script, VB Script, Java, Perl, and CGI. *Prerequisite: CPTR 246 or consent of instructor. Alternate years.*

345

INTRODUCTION TO COMPUTER GRAPHICS

An introduction to graphics hardware and software with emphasis on the mathematics necessary to represent, transform, and display images of two- and three-dimensional objects. Subjects covered include but not limited to: three dimensional modeling and viewing, color models, and rendering. *Prerequisite: CPTR 246 and either CPTR 247 or consent of instructor; MATH 130 recommended. Alternate years.*

346

COMPUTER ORGANIZATION AND MACHINE LANGUAGE

Principles of computer organization, architecture, and machine language. Topics include machine and assembly languages, internal representation of data, processor data path and control, pipelined processors, memory hierarchies, and performance issues.

Laboratory experience is included. *Prerequisite: A grade of C- or better in CPTR 246; CPTR 247 strongly recommended.*

349**DATABASE SYSTEMS**

An in-depth introduction to the relational database model and SQL. Topics include but are not limited to: relational algebra, relational calculus, normalization, design theory of relational databases, SQL standards, and query optimization. *Prerequisite: CPTR 247. Alternate years.*

441**INTRODUCTION TO ARTIFICIAL INTELLIGENCE**

Introduction to the theory, implementation techniques, and applications of artificial intelligence. Topics may include but are not limited to knowledge representation, problem solving, modeling, robotics, natural language analysis, and computer vision. *Prerequisite: CPTR 247. Alternate years.*

445**OPERATING SYSTEMS**

Detailed analysis of processes, scheduling, multithreading, symmetric multiprocessing, file management, real and virtual memory management, file and memory addressing, and distributed processing. *Prerequisite: CPTR 247 and 346.*

448**ADVANCED DESIGN AND DEVELOPMENT**

Individual or group research and implementation projects. Includes analysis, design, development and documentation of a significant current, relevant problem and its computer-based solution. *Prerequisite: CPTR 247. Alternate years.*

N80-N89**INDEPENDENT STUDY (See index)****490-491****INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)****MATHEMATICS (MATH)**

A major in mathematics consists of 10 unit courses in the mathematical sciences: CPTR 125, MATH 128, 129, 130, 234, 238, 432, 434, and two other mathematics courses numbered 220 or above, one of which may be replaced by MATH 112, 116 or 214. In addition, four semesters of non-credit Math Colloquium are required: two semesters each of MATH 339 and MATH 449. Students who are interested in pursuing a career in actuarial science should consider the actuarial mathematics major.

Students seeking secondary teacher certification in mathematics are also required to complete MATH 330, 336, and one from 123, 214 or 332, and are advised to enroll in PHIL 217. Also, all majors are advised to elect PHIL 225, 333 and PHYS 225, 226. Other courses required for certification are PSY 110, 138; EDUC 200, 446, 447, 449.

In addition to the regular courses listed below, special courses are occasionally available.

The following course has been approved to be offered as a writing intensive course and may be offered as such: MATH 234. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in mathematics consists of MATH 128, 129, 234, 238, and two additional courses numbered 200 or above, one of which may be replaced with MATH 130.

100**INDIVIDUALIZED LABORATORY INSTRUCTION IN BASIC ALGEBRA**

A computer-based program of instruction in basic algebra including arithmetic and decimals, fractions, the real number line, factoring, solutions to linear and quadratic equations, graphs of linear and quadratic functions, expressions with rational exponents, algebraic functions, exponential functions, and inequali-

ties. This course is limited to students placed therein by the Mathematics Department. *One-half unit of credit.*

106**COMBINATORICS**

An introduction to the analysis of counting problems. Topics include permutations, combinations, binomial coefficients, inclusion/exclusion principle, and partitions. The nature of the subject allows questions to be posed in everyday language while still developing sophisticated mathematical concepts. *Prerequisite: Credit for or exemption from MATH 100.*

109**APPLIED ELEMENTARY CALCULUS**

An intuitive approach to the calculus concepts with applications to business, biology, and social-science problems. Not open to students who have completed MATH 128. *Prerequisite: Credit for or exemption from MATH 100.*

112**FINITE MATHEMATICS
FOR DECISION-MAKING**

An introduction to some of the principal mathematical models, not involving calculus, which are used in business administration, social sciences, and operations research. The course will include both deterministic models such as graphs, networks, linear programming and voting models, and probabilistic models such as Markov chains and games. *Prerequisite: Credit for or exemption from MATH 100.*

116**DISCRETE MATHEMATICS**

An introduction to discrete structures. Topics include equivalence relations, partitions and quotient sets, mathematical induction, recursive functions, elementary logic, discrete number systems, elementary combinatorial theory, and general algebraic structures emphasizing semi-groups, groups, lattices, Boolean algebras, graphs, and trees. *Prerequisite: CPTR 125 or consent of instructor.*

123**INTRODUCTION TO STATISTICS**

Topics include tabular and graphical descriptive statistics, discrete and continuous probability distributions, Central Limit Theorem, one- and two-sample hypotheses tests, analysis of variance, chisquared tests, nonparametric tests, linear regression and correlation. Other topics may include index numbers, time series, sampling design, and experimental design. Course also includes some use of a microcomputer. *Prerequisite: Credit for or exemption from MATH 100.*

127**PRECALCULUS MATHEMATICS**

The study of polynomial, rational, exponential, logarithmic, and trigonometric functions, their graphs and elementary properties. This course is an intensive preparation for students planning to take Calculus (MATH 128-129), those in the Scholars Program, or those whose major specifically requires Precalculus. *Prerequisite: Credit for or exemption from MATH 100.*

128-129**CALCULUS WITH ANALYTIC
GEOMETRY I - II**

Differentiation and integration of algebraic and trigonometric functions, conic sections and their applications, graphing plane curves, applications to related rate and external problems, areas of plane regions, volumes of solids of revolution, and other applications; differentiation and integration of transcendental functions, parametric equations, polar coordinates, infinite sequences and series, and series expansions of functions. *Prerequisite for 128: Exemption from or a grade of C- or better in MATH 127. Prerequisite for 129: exemption from or a grade of C- or better in MATH 128.*

130**INTRODUCTION TO MATRIX ALGEBRA**

Systems of linear equations and matrix arithmetic. Points and hyperplanes, infinite dimensional geometries. Bases and linear

independence. Matrix representations of linear mappings. The fixed point problem. Special classes of matrices. *Prerequisite: MATH 127 or its equivalent.*

205**MATHEMATICS IN ELEMENTARY EDUCATION**

This course is intended for prospective elementary school teachers and is required of all those seeking elementary certification. Topics include systems of numbers and numeration, computational algorithms, environmental and transformation geometry, measurement, and mathematical concept formation. Observation and participation in Greater Williamsport elementary schools. *Prerequisite: PSY 138 and credit for or exemption from MATH 100. Corequisite: Any EDUC course numbered 341 or above which is specifically required for elementary certification.*

214**MULTIVARIABLE STATISTICS**

The study of statistical techniques involving several variables. Topics include multiple regression and correlation, one-and two-way analysis of variance, analysis of covariance, analysis of two- and three-way contingency tables, and discriminant analysis. Other topics may include cluster analysis, factor analysis and canonical correlations, repeated measure designs, time series analysis, and nonparametric methods. Course also includes extensive use of a statistical package (currently BMDP). *Prerequisite: A grade of C- or better in MATH 123 or its equivalent, or MATH 332.*

231**DIFFERENTIAL EQUATIONS**

A study of ordinary differential equations and linear systems. Solution techniques include: reduction of order, undetermined coefficients, variation of parameters, Laplace transforms, power series, and eigenvalues and eigenvectors. A brief discussion of numerical

methods may also be included. *Prerequisite: A grade of C- or better in MATH 129; MATH 130 recommended.*

233**COMPLEX VARIABLES**

Complex numbers, analytic functions, complex integration, Cauchy's theorems and their applications. *Corequisite: MATH 238. Alternate years.*

234**FOUNDATIONS OF MATHEMATICS**

Topics regularly included are the nature of mathematical systems, essentials of logical reasoning, and axiomatic foundations of set theory. Other topics frequently included are approaches to the concepts of infinity and continuity, and the construction of the real number system. The course serves as a bridge from elementary calculus to advanced courses in algebra and analysis. *Prerequisite: A grade of C- or better in MATH 129 or 130; both courses recommended.*

238**MULTIVARIABLE CALCULUS**

Algebra, geometry, and calculus in multi-dimensional Euclidean space; n-tuples, matrices; lines, planes, curves, surfaces; vector functions of a single variable, acceleration, curvature; functions for several variables, gradient; line integrals, vector fields, multiple integrals, change of variable, areas, volumes; Green's theorem. *Prerequisites: A grade of C- or better in MATH 129, and either MATH 130 or 231.*

321**INTRODUCTION TO NUMERICAL ANALYSIS**

Topics from the theory of interpolation; numerical approaches to approximating roots and functions, integration, systems of differential equations, linear systems, matrix inversion, and the eigenvalue problem. *Prerequisite: CPTR 125 and MATH 129; MATH 130 strongly recommended Cross-listed as CPTR 321.*

324**AUTOMATA, FORMAL LANGUAGES,
AND COMPUTABILITY**

The study of finite state machines, push-down stacks, and Turing machines along with their equivalent formal language counterparts. Topics covered include results on computability, including results regarding the limits of computers and specific problems that cannot be solved. *Prerequisite: MATH 116 or 234. Cross-listed as CPTR 324. Alternate years.*

330**TOPICS IN GEOMETRY**

An axiomatic treatment of Euclidean geometry with an historical perspective. *Prerequisite: MATH 234. Alternate years.*

332-333**MATHEMATICAL STATISTICS I-II**

A study of probability, discrete and continuous random variables, expected values and moments, sampling, point estimation, sampling distributions, interval estimation, test of hypotheses, regression and linear hypotheses, experimental design models. *Corequisite: MATH 238. Alternate years.*

336**CONCEPTS OF MATHEMATICS
IN SECONDARY EDUCATION**

A course designed for mathematics majors who are planning to teach at the secondary level. Emphasis will be placed on the mathematics that form the foundation of secondary mathematics. Ideas will be presented to familiarize the student with the various curriculum proposals, to provide for innovation within the existing curriculum, and to expand the boundaries of the existing curriculum. *Prerequisite: A grade of C- or better in MATH 129; student must be junior or senior mathematics major enrolled in the secondary certification program.*

338**OPERATIONS RESEARCH**

Queuing theory, including simulations techniques, optimization theory, including linear programming, integer programming, and dynamic programming; game theory, including two-person zero-sum games, cooperative games, and multiperson games. *Prerequisite: MATH 112 or 130. Alternate years.*

432**REAL ANALYSIS**

An introduction to the rigorous analysis of the concepts of real variable calculus in the setting of normed spaces. Topics from: topology of the Euclidean plane, completeness, compactness, the Heine-Borel theorem; functions on Euclidean space, continuity, uniform continuity, differentiability; series and convergence; Riemann integral. *Prerequisite: MATH 238 and a grade of C- or better in MATH 234.*

434**ABSTRACT ALGEBRA**

An integrated approach to groups, rings, fields, and vector spaces and functions which preserve their structure. *Prerequisite: MATH 130 and a grade of C- or better in MATH 234.*

438**SEMINAR**

Topics in modern mathematics of current interest to the instructor. A different topic is selected each semester. This semester is designed to provide junior and senior mathematics majors and other qualified students with more than the usual opportunity for concentrated and cooperative inquiry. *Prerequisite: Consent of instructor. One-half unit of credit. This course may be repeated for credit.*

339 & 449**MATH COLLOQUIUM**

This non-credit but required course for mathematics and actuarial mathematics majors offers students a chance to hear presentations on topics related to, but not directly covered in formal MATH courses. Mathematics majors



MILITARY SCIENCE (MLSC)

The U.S. Army Reserve Officer Training Corps (ROTC) program is offered to Lycoming College students in cooperation with Bucknell University. The introductory courses are taught on Lycoming's campus and the program provides transportation to Bucknell University for the advanced courses. Details of the ROTC program can be found on page 41.

The following courses may be used to fulfill one semester of the Physical Activities Distribution Requirement: 011, 021, 031 or 041.

011

INTRODUCTION TO ROTC

The course is designed to acquaint the student with the ROTC program and with the Army as a potential employer after graduation. Students will learn about the Army's history, organization, equipment, and role in the nation. Students will also learn some fundamental military skills, customs, and traditions. No credit.

012

INDIVIDUAL MILITARY SKILLS

The course expands upon the skills learned in the previous semester. Several classes will be held at the rifle range to develop marksmanship skills. There will also be training in radio communication and first aid skills. No credit.

021

LAND NAVIGATION

Students will learn how to use military topographic maps and reference systems. The course includes theory and practical exercises in navigating using compass, map terrain association. There will also be some instruction and practice in military writing and briefing skills. No credit.

022

LEADERSHIP THEORY

The focus is on leading a small group of individuals. The course examines the role of

present two lectures, one during the junior year and one during the senior year. Actuarial mathematics majors present one lecture during one of the semesters in which they are enrolled. A letter grade will be given in semesters in which the student gives a presentation, otherwise the grade will be P/F.
Prerequisite: junior standing or consent of instructor. One hour per week.

470-479

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

the leader, military leadership concept, personal character, decision-making, implementing decisions, motivation and supervision. The course also includes instruction and practice on conducting performance-oriented training. No credit.

031**APPLIED LEADERSHIP**

The student serves as a small unit leader in the ROTC organization. Student leadership is evaluated and developed. The student has some responsibilities to care for and train younger cadets. Instruction on small (infantry) unit tactics is used as a vehicle to provide students a variety of leadership challenges. No credit.

032**SMALL UNIT TACTICS**

The course requires planning and practicing tactical operations at small unit level. Students continue to apply/develop leadership skills in increasingly complex situations. Topics include preparation of orders, offense, defense, reconnaissance, patrolling, fire support, and airmobile operations. No credit.

041**MENTORING AND MANAGING**

The student serves as a cadet officer in the ROTC organization and plans and organizes several major training activities. Course work includes delegating and controlling, setting objectives, making leadership assessments, counseling, supervising, and evaluating. No credit.

042**PROFESSIONALISM AND ETHICS**

The student serves in a different leadership position and continues to develop and apply the skills learned in the previous semester. The course also examines military officership as a profession and the ethical behavior expected of an officer. The course also serves to prepare the student for an initial assignment as an Army lieutenant. No credit.

**MUSIC (MUS)**

Professors: Boerckel (Chairperson), Thayer
Visiting Instructor: Woodruff

Part-time Instructors: Anstey, Bailey, Breon, Janda, Laib, Lakey, Leidhecker, Lundquist, McEuen, Mullen, Orris

The student majoring in music is required to take a balanced program of music theory, history, applied music, and ensemble. A minimum of eight courses (exclusive of all ensemble, applied music and instrumental and vocal methods courses) is required and must include MUS 110, 111, 220, 221, 335, and 336. Each major must participate in an ensemble (MUS 167, 168, and/or 169) and take one hour of applied music per week for a minimum of four semesters including the entire period in which the individual is registered as a music major (see MUS 160-169). The major must include at least one-half hour of piano in the applied program unless a piano proficiency test is requested and passed. Anyone declaring music as a second major must do so by the beginning of the junior year.

Music majors seeking teacher certification in music education (K-12) must also take PSY 110 and 138; EDUC 200, the pre-student teaching participation, and the Professional Semester; MUS 261-7, 333, 334, 340, 341, 446, and pass the piano proficiency examination. Students who wish to obtain certification in music education should consult with the

partment as soon as possible, preferably before scheduling classes for the freshman year.

The Music Department recommends that on-majors select courses from the following list to meet distribution requirements: MUS 16, 117, 128, 135-8, 224, and 234. Applied music and ensemble courses may also be used to meet distribution requirements.

Student recitals offer opportunities to gain experience in public performance. Music majors and other students qualified in performance may present formal recitals.

The following courses have been approved to be offered as cultural diversity courses: MUS 16, 128, 234. Students must check semester class schedules to determine which courses are offered as "D" courses for that semester.

The following course has been approved to be offered as a writing intensive course and may be offered as such: MUS 336. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

110-111

MUSIC THEORY I AND II

A two-semester course, intended for students who have some music-reading ability, which examines the fundamental components and theoretical concepts of music. Students develop musicianship through application of applied skills. *Prerequisite to MUS 111: MUS 110.*

116

INTRODUCTION TO MUSIC

A basic course in the materials and techniques of music. Examples drawn from various periods of western and non-western styles are designed to enhance perception and appreciation through careful and informed listening.

117

SURVEY OF WESTERN MUSIC

A chronological survey of music in Western civilization from Middle Ages to the present. Composers and musical styles are considered in the context of the broader culture of each major era.

128

AMERICAN MUSIC

An introductory survey of all types of American music from pre-Revolutionary days to the present. Categories to be covered are folk music of different origins, the development of show music into Broadway musicals, serious concert music for large and small ensembles, jazz, and various popular musics from "Tin Pan Alley" to Rock to New Wave. *Alternate years.*

135-136

INTRODUCTION TO DANCE I AND II

An introduction to the techniques of basic movement and interpretation in ballet, jazz, and modern dance. Classes include improvisation and choreography. *Prerequisite for MUS 136: MUS 135 or consent of instructor. One-half unit of credit each. Not open to students who have received credit for THEA 135-136 or THEA 235-236.*

137

HISTORY OF THE DANCE I

A survey of classical ballet from the *Ballets de cour* of 17th century France to the present with emphasis on the contributions of Petipa, Fokine, Cecchetti, and Balanchine. *One-half unit of credit. Not open to students who have received credit for THEA 137 or 138.*

138

HISTORY OF THE DANCE II

A survey of the forms of dance, excluding classical ballet, as independent works of art and as they have reflected the history of civilization from primitive times to the present. *Prerequisite: MUS 137 or consent of instructor. One-half unit of credit. Not open to students who have received credit for THEA 137 or 138.*

220-221

MUSIC THEORY III AND IV

A continuation of the integrated theory course moving toward newer uses of music materials. *Prerequisite: MUS 111.*

224**ELECTRONIC MUSIC I**

A non-technical introduction to electronic music and MIDI (Musical Instrument Digital Interface) for the major and non-major alike. The course traces the development of MIDI from its origin to present-day digital synthesizers in combination with sequencing computers.

225**ELECTRONIC MUSIC II**

Further consideration of recording techniques. Use of microphones, multi-track recording, mixing, special effects devices, and synchronization will be introduced. Students will take part in live recording of concerts and rehearsals of a variety of ensembles. Student projects will include complete recording sessions and the production of electronic music compositions utilizing classical studio techniques and real-time networks. *Prerequisite: MUS 224 or consent of instructor.*

234**HISTORY OF JAZZ**

A survey of jazz styles, composers, and performers from 1890 to the present: origins, ragtime, blues, New Orleans, Chicago, swing, bebop, cool, funky, free jazz, third stream, and contemporary.

235-236**INTERMEDIATE DANCE I AND II**

Studies of the techniques of basic movement and interpretation in ballet, jazz and modern dance at the intermediate level. Classes include improvisation and choreography. *Prerequisite for MUS 235: MUS 136 or consent of instructor. Prerequisite for MUS 236: MUS 235 or consent of instructor. One-half unit of credit each. Not open to students who have received credit for THEA 135-136 or THEA 235-236.*

330**COMPOSITION I**

An introductory course for majors and non-majors who wish to explore their composing abilities. Guided individual projects in smaller

instrumental and vocal forms, together with identification and use of techniques employed by the major composers of the 20th century. *Prerequisite: MUS 111 or consent of instructor.*

333**CHORAL CONDUCTING**

A study of choral conducting with frequent opportunity for practical experience. Emphasis will be placed upon technical development, rehearsal technique, and stylistic integrity.

Prerequisite: MUS 110-111 or consent of instructor. Alternate years.

334**INSTRUMENTAL CONDUCTING**

A study of instrumental conducting with an emphasis on acquiring skills for self-analysis. Topics include the physical skills and intellectual preparation necessary for clear, expressive, and informed conducting. Other areas such as the development of rehearsal techniques and improvement of aural skills will be addressed on a continual basis. *Prerequisite: MUS 110-111 or consent of instructor. Alternate years.*

335**HISTORY OF WESTERN MUSIC I**

The development of musical styles and forms from Gregorian chant through Mozart, including composers from the medieval, Renaissance, baroque, and early classical eras.

336**HISTORY OF WESTERN MUSIC II**

The development of musical styles and forms from Beethoven to the present, including composers from the late classical, romantic, and modern eras.

339**ORCHESTRATION**

A study of modern orchestral instruments and examination of their use by the great masters with practical problems in instrumentation. The College Music Organizations serve to make performance experience possible. *Prerequisite: MUS 110-111 or consent of instructor. Alternate years.*

340

TEACHING MUSIC IN THE ELEMENTARY SCHOOL

Methods and materials of teaching music in the elementary school with emphasis on conceptual development through singing, moving, listening, playing classroom instruments, and creating music. Course work will include peer teaching demonstrations, practical use of the recorder and autoharp, as well as observation of music classes in elementary schools in the Greater Williamsport area.

Alternate years.

341

TEACHING MUSIC IN SECONDARY SCHOOLS

Methods and materials of teaching music in the secondary schools with emphasis on the development of concepts and skills for effective instruction in all aspects of music learning. The teaching of general music and music theory, as well as the organizing and conducting of choral and instrumental ensembles, will be examined. Course work will include evaluation of instructional and performance materials, practical use of the recorder and guitar in middle school settings, as well as observation of music classes in secondary schools in the Greater Williamsport area. *Alternate years.*

440

COMPOSITION II

For students interested in intensive work emphasizing the development of a personal style of composing. Guided individual projects in larger instrumental and vocal forms, together with analysis of selected works from the 20th century repertory. *Prerequisite: MUS 330 or consent of instructor.*

445

SPECIAL TOPICS IN MUSIC

The intensive study of a selected area of music literature, designed to develop research techniques in music. The topic is announced

at the Spring pre-registration. Sample topics include: Beethoven, Impressionism, Vienna 1900-1914. *Prerequisite: MUS 116, 117 or 221; or consent of instructor.*

446

RECITAL

The preparation and presentation of a full-length public recital, normally during the student's senior year. MUS 446 may substitute for one hour of applied music (MUS 160-166). *Prerequisite: Approval by the department. May be repeated for credit.*

470-479

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

APPLIED MUSIC AND ENSEMBLE

The study of performance in piano, harpsichord, voice, organ, strings, guitar, brass, woodwinds, and percussion is designed to develop sound technique and a knowledge of the appropriate literature for the instrument. Student recitals offer opportunities to gain experience in public performance.

Credit for applied music courses (private lessons) and ensemble (choir, orchestra and band) is earned on a fractional basis. One hour lesson per week earns one hour credit. One half-hour lesson per week earns one half-hour credit. Ensemble credit totals one hour credit if the student enrolls for one or two ensembles (for more information, see course descriptions below). When scheduling please note that an applied course or ensemble should not be substituted for an academic course, but should be taken in addition to the normal four academic courses.

Applied music courses are private lessons given for 13 weeks: 160, Piano or Harpsichord; 161, Voice; 162, Strings or Guitar; 163, Organ; 164, Brass; 165, Woodwinds; and 166, Percussion. Extra fees apply. See Additional Charges under Financial Matters on page 14.

167**ORCHESTRA**

The Williamsport Symphony Orchestra allows students with significant instrumental experience to become members of this regional ensemble. Participation in the W.S.O. is contingent upon audition and the availability of openings. Students are allowed a maximum of one hour of Ensemble credit per semester. A student who is enrolled in orchestra only should register for MUS 167B (one hour credit). A student may belong to two ensembles, choosing either Choir or Concert Band as the second group. Such a student will then register for MUS 167A (1/2 hour credit) plus either MUS 168A (1/2 hour credit) or MUS 169A (1/2 hour credit).

168**CHOIR**

The Lycoming College Choir is open to all students who would like to sing in an ensemble setting. Emphasis is on performing quality choral literature while developing good vocal technique. Students are allowed a maximum of one hour of Ensemble credit per semester. A student who is enrolled in Choir only should register for MUS 168B (one hour credit). A student may belong to two different ensembles, choosing either Orchestra or Band as the second ensemble. Such a student will then register for MUS 168A (1/2 hour credit) plus either MUS 167A (Orchestra - 1/2 hour credit) or MUS 169A (Band - 1/2 hour credit). If a student has auditioned and been selected for the Chamber Choir (no credit available), he/she should register for MUS 168C in addition to registering for the Lycoming College Choir.

169**BAND**

The College Concert Band allows students with some instrumental experience to become acquainted with good band literature and develop personal musicianship through participation in group instrumental activity. Participation in the Band is contingent upon audition. Students are allowed a maximum of one hour of Ensemble credit per semester. A student who is enrolled in Band only should register for MUS 169B (one hour credit). A student may belong to two ensembles, choosing either Orchestra or Choir as the second group. Such a student will then register for MUS 169A (1/2 hour credit) plus either MUS 167A (1/2 hour credit) or MUS 168A (1/2 hour credit). If a student has auditioned and been selected for the woodwind or brass quintets (no credit available), he/she should register for MUS 169C or 169D.

261-267**INSTRUMENTAL AND VOCAL METHODS**

Instrumental and vocal methods classes are designed to provide students seeking certification in music education with a basic understanding of all standard band and orchestral instruments as well as a familiarity with fundamental techniques of singing.

MUS 261	Brass Methods (one hour credit)
MUS 262	Percussion Methods (one hour credit)
MUS 263, 264	String Methods I and II (one hour credit each)
MUS 265	Vocal Methods (one hour credit)
MUS 266, 267	Woodwind Methods I and II (one hour credit each)



NURSING (NURS)

PROGRAM NOTE: *The Bachelor of Science in Nursing degree will be discontinued as of August 2003. In order to enter the Nursing program, a student must complete all degree requirements (distribution, major, and electives) by the end of August 2003.*

Professor: Pagana

Associate Professor: Parrish (Chairperson),
Visiting Instructors: Hartung, Terry-Manchester
Visiting Assistant Professor: Ingram

Part-time Instructors: Bower, Davis, Hoy,
Maloney, Stoll,

Courses in Nursing will not be available
after spring semester 2003.

Students wishing to major in nursing will be admitted to the College under the usual admission procedures. Freshmen are required to satisfactorily complete ENGL 106 or 107, BIO 110-111 and PSY 110. In addition, to be considered for continuation in nursing, a minimum GPA of 2.50 is required at completion of the freshman year, and any student who did not successfully complete high school chemistry must satisfactorily complete one semester of college chemistry. A declaration of major form should be submitted to the Department of Nursing by April 30 of the Freshman year.

Major in Nursing

The major in nursing consists of: NURS 120, 121, 200, 221, 324, 330, 331, 332, 333, 337, 338, 339, 340, 424; 432 and 433, or 435;

438, 439, 440, 441, and 442. Statistics also is required. Courses are ordered and must be taken in sequence. In addition, the following are prerequisites for specific nursing courses: BIO 110, 111, 323, 328; PSY 110. NURS 339 and 340 are taken the May Term between the junior and senior years.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: NURS 221, 432 and 433, and 435. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Second Degree Students

The Department of Nursing offers a unique opportunity for individuals who have already earned a baccalaureate degree in another discipline to complete the requirements for a B.S.N. in 18 months. Students interested in pursuing this FasTrack program must complete the liberal arts and general science requirements prior to beginning this 18 month clinical track.

Applications are accepted throughout the academic year with clinical nursing courses beginning in Summer Session I. Individualized advisement is available on an ongoing basis through the Department of Nursing.

Registered Nurses

The Department of Nursing offers an alternative curriculum for registered nurses within the existing B.S.N. program. The goals of this alternative curriculum are to provide registered nurses with the opportunity to earn an educationally sound B.S.N. degree while completing the degree requirements in as short a time period as possible, and to meet the unique needs of registered nurses. NURS 302 is open only to registered nurses and is required as part of the alternative curriculum.

The Department of Nursing supports the Pennsylvania Articulation Model which promotes the practice of providing educational programs for nurses from state approved and National League for Nursing accredited schools

which facilitates progression into the next educational program without unnecessary repetition. Validation testing (ACT PEP exams, Mosby Assess Test, or NLN Mobility Exams) will be required for (1) individuals who graduated from any nursing program more than 10 years prior to application, (2) individuals who graduated more than 3 years prior to application and who have not worked at least 1000 hours in the preceding 3 years, or (3) individuals who graduated from non-NLN accredited nursing programs.

RNs from an NLN accredited program who graduated within 3 years of matriculating into the B.S.N. program and RNs who graduated from an NLN accredited program more than 3 but not more than 10 years before matriculating into the B.S.N. program and who have worked for at least 1000 hours within the last three years will receive transfer credit for NURS 200 (1 credit), 221 (3 credits), 330, 331, 332, 333, 337, 338, 340, and 440 upon successful completion of NURS 441, Comprehensive Nursing Care.

To obtain the B.S.N., all RNs will be required to successfully complete NURS 302, 339, 424; 432 and 433, or 435; 438, 439, 441, and 442. In addition, RNs will be required to take any 4 science courses chosen from CHEM 108 or higher, BIO 110 or higher, PHYS 225 or higher, or other courses approved by the Department of Nursing upon evaluation of a student's transcript.

Additional information for registered nurses seeking the B.S.N. is available from the Department of Nursing. Individual advising is offered to all registered nurses.

School Nurse Certification

The Department of Nursing, in collaboration with the Department of Education, offers an additional curriculum for the Registered Nurse with a B.S.N. (or a Lycoming College nursing student) who wishes to be certified as a school nurse. The goal of this program is to provide the RN with a B.S.N. an opportunity for career mobility. Courses required for completion of

the certification program consist of EDUC 200, an approved education-related elective, PSY 138, and NURS 422, 423, 424, 430, and 431. In addition, the following are prerequisites for specific courses: PSY 110 and 117.

Additional information for registered nurses seeking School Nurse Certification is available from the Department of Nursing. Individualized advising is offered to all prospective School Nurse Candidates.

Clinical Learning Resources

In addition to the College's modern, well-equipped Nursing Skills Lab complete with Critical Care Unit and interactive video technology, opportunity for self-learning is provided in the adjacent Learning Center which is equipped with electronic study carrels and audio-visual materials.

A wide variety of health-care agencies in the surrounding area is utilized for clinical experiences. Cooperating hospitals and agencies include: Susquehanna Health Services, Evangelical Hospital, Geisinger Medical Center, Leader Nursing Home and Rehabilitation Center, Danville State Hospital, Pennsylvania Department of Health, Regional Home Health Services, Rose View Manor, and The Williamsport Home.

Expenses of the Nursing Program

Students are responsible for their own transportation to assigned clinical areas. The student of nursing assumes all financial obligations listed in the section on fees in this bulletin including a \$50 lab fee for each of the clinical nursing courses (NURS 200, 221, 330, 331, 332, 333, 340, 438, 439, 440, and 441). Additional expenses include uniforms, name pin, watch with second hand, bandage scissors, stethoscope, blood pressure cuff, annual health examinations, and standardized achievement tests.

Students must also maintain annual Health Provider CPR certification as offered by the American Heart Association or American Red Cross.

Policies Specific to Nursing

In addition to the Lycoming College continuance policies, the following policies are specific to all declared majors in the Department of Nursing:

1. A grade of C- or better is required in all clinical nursing courses to continue in the nursing program. These courses are NURS 200, 221, 330, 331, 332, 333, 340, 438, 439, 440, and 441. Students who earn a grade of less than 70 percent or 1.67 in either the theoretical or clinical component of a nursing course will be required to repeat both components of the course before being permitted to continue in the nursing sequence. Students who do not satisfy this requirement in the second attempt will be dismissed from the nursing program.
2. Policies regarding absence from classes or from the clinical portion of nursing courses are determined by the instructor(s) responsible for the course. No absence from the clinical portion of the course will be excused other than for illness or family emergency. In individual cases, students may make arrangements with instructors to be excused for extracurricular activities. Excessive absence for any reason will necessitate repeating the entire course.

Nursing Scholars Program

The Nursing Scholars Program is a departmental honors program designed to recognize and support continued development of the academically talented student. Students who are invited to membership in this program participate in special nursing seminars, have internships and/or independent study experiences and give formal presentations during the senior year.

To be invited to become a Nursing Scholar, a student must have:

- a. Declared a major in nursing.
- b. Participated in three activities sponsored by the Center for Nursing Excellence (CNE).

- c. Demonstrated academic excellence with an overall GPA of 3.25 or higher.
- d. Demonstrated those qualities most conducive to a positive and contributing member of the nursing profession including professional commitment and community service.

To graduate as a Nursing Scholar, the student must :

- a. Complete an approved internship, practicum and/or independent study or honors project;
- b. Maintain an overall GPA of 3.25 and a nursing GPA of 3.25.
- c. Continue to participate in CNE sponsored activities.
- d. Continue to develop those attributes necessary for professional success, including a commitment to the profession and community service.

Students with a major in nursing and who are currently Lycoming College Scholars may become Nursing Scholars and participate in both programs.

Center for Nursing Excellence

The Center for Nursing Excellence (CNE) provides educational opportunities for Lycoming College students as well as health care professionals in the greater Williamsport community. The CNE offers professional education in the form of courses-for-credit and non-credit continuing education (CE) courses.

All students who have a declared major in nursing or who are designated prenursing are encouraged to participate in career and professional development seminars offered by faculty from the Department of Nursing. In addition, a limited number of internships are available to qualified applicants. Additional information is available through the Center for Nursing Excellence.

101

TOPICS IN HEALTH

Exploration of health-related topics designed for the prenursing or first-year nursing student and non-majors. Topics vary. *May be repeated*

for credit. No prerequisites. 1/2 unit of credit. May not be used to satisfy major requirements.

120**NURSING SEMINAR I**

Designed for the pre-nursing student. Focus is on career opportunities available to nurses, roles and responsibilities of nurses, educational requirements, and history of nursing. Emphasis is also placed on survival skills for college and for the nursing major. The grade will be P/F. *Non-credit course.* One hour per week. This course is required of all pre-nursing students.

121**NURSING SEMINAR II**

Continuation of Nursing Seminar I. Focus is on the development of professional writing skills pertinent to nursing, professional behaviors, and portfolio development. The grade will be P/F. *Non-credit course.* One hour per week. This course is required of all pre-nursing students.

200**HEALTH PROMOTION AND WELLNESS ACROSS THE LIFESPAN**

Primary focus on wellness which includes normal growth and development, health promotion and essentials of normal nutrition. Introductory therapeutic communication and teaching/learning skills are explored. Application of theory to individuals, families and communities occurs during clinical experiences in the community setting. *One hour of lecture and 3 1/2 hours of clinical lab. 1/2 unit of credit.* Prerequisites: BIO 110, 111 and GPA of 2.50 or higher at the completion of the Freshman year. Corequisite: BIO 323 or 338.

221**FOUNDATIONS OF PROFESSIONAL PRACTICE**

Introduction of major theoretical elements underlying professional practice. Focus on

common health problems and basic rehabilitation principles while recognizing the multi-directional influence of the individual, family and environment. The student will utilize the nursing process in assisting clients to attain a maximum level of functioning. *Two hours of lecture and seven hours of clinical laboratory. 1 unit of credit.* Prerequisites: BIO 110, 111; Prerequisite or Corequisite: BIO 323 or 338. Open to nursing majors only.

302**PERSPECTIVES ON PROFESSIONAL NURSING**

This course introduces the student to the historical and political development of the profession of nursing. The foundations of professional nursing practice are discussed with a critical view on nursing theory, professionalism in nursing, and career development. Meets 2 hours weekly for 1/2 unit of credit. Open to RNs only.

324**HEALTH ASSESSMENT**

Identification and demonstration of basic physical assessment skills. Emphasis placed on assessment findings across the life span. Focus on normal findings with attention on development of skill and confidence in performing physical assessments. Meets two hours weekly for 1/2 unit. Corequisite: NURS 330, 332, or consent of instructor. Open to non-majors by consent of instructor.

330-331**NURSING CARE OF THE DEVELOPING FAMILY**

Examination of health and nursing needs of beginning and developing families. Initial emphasis on nursing needs of mothers and infants within the family unit as well as the common health problems of children through adolescence. Subsequent emphasis on nursing needs of children and mothers with health problems of acute and long term nature, the influence of illness on the family. Three hours of lecture, 7 hours clinical laboratory. 1 1/4

units each. Prerequisite for NURS 330: NURS 221; Corequisites: NURS 324, 332, and 337. Prerequisite for NURS 331: NURS 324, 330, 332, and 337; Corequisites: NURS 333, 338, and 424.

332-333

NURSING CARE OF THE ADULT

Identification of adult health care needs and implementation of nursing activities based on an understanding of growth and development, pathophysiology, communication skills, interpersonal dynamics, and psychosocial interventions. *Three hours of lecture, 7 hours clinical laboratory. 1 1/4 units each. Prerequisite for NURS 332: NURS 221, Corequisites: NURS 324, 330, and 337. Prerequisites for NURS 333: NURS 330, 332, and 337. Corequisites: NURS 331, 338, and 424.*

337-338

BASIC CONCEPTS OF PHARMACOLOGY AND THERAPEUTICS I and II

Fundamentals of pharmacology and therapeutics are presented for the various classes of drugs. Relationships of pharmacological mechanisms to the affected biochemical and physiological processes. Interactions and toxicological aspects of drug therapy are reviewed. *Two hours of lecture for 1/2 unit of credit each. Corequisites for NURS 337: NURS 324, 330, and 332, or consent of instructor. Corequisites for NURS 338: NURS 331, 333, and 424, or consent of instructor. Open to non-nursing majors with appropriate science background, corequisites waived for non-majors.*

339

PATHOPHYSIOLOGY

The study of physiologic mechanisms altered by illness, injury or disease processes in humans. Fundamental disease processes, specific illnesses, and their effects on human homeostasis will be discussed. The links between pathophysiology, diagnosis, and therapeutic interventions will be emphasized. *One-half unit of credit. Prerequisites: NURS 331, 333, 338, or consent of instructor. Open*

to non-majors by consent of instructor.

340

CLINICAL PRACTICUM

Focus is on the integration of concepts from pathophysiology, application of knowledge while caring for clients with complex health problems in a variety of nursing settings. Students will enhance current skill level and organization of care. 96 hours of clinical laboratory. *One-half unit of credit. Prerequisites: NURS 331, 333, 338.*

Corequisite: NURS 339

422

HEALTH EDUCATION

Examination of learning theories appropriate to all age groups. Discussion of the concepts and techniques necessary for assessment, planning, implementation, and evaluation of the teaching/learning process. Emphasis will be placed on self care. *Two hour lecture for 1/2 unit of credit. Required for school nurse candidates. Prerequisite: Senior standing or consent of instructor.*

423

HEALTH EDUCATION CLINICAL

Clinical practice includes teaching experience in the public school system. This practice results in a culmination of the theoretical content contained in NURS 422. *Five hour clinical laboratory for 1/2 unit of credit. Required for School Nurse Candidates. Prerequisites: Senior standing or consent of instructor.*

424

ADVANCED HEALTH ASSESSMENT

Identification and demonstration of advanced assessment techniques with an emphasis on abnormal findings. Learning experiences are provided to develop a systematic approach to physical assessment. Throughout the course, emphasis is placed on the correlation of assessment findings and major health deviations. *Meets two hours weekly for 1/2 unit of credit. Corequisites: NURS 331 and 333, or consent of instructor.*

425

ADVANCED HEALTH ASSESSMENT CLINICAL LABORATORY

A clinical laboratory that allows additional practice for the student enrolled in NURS 424. *Five hours clinical laboratory for 1/2 unit of credit. Prerequisite: Senior standing or consent of instructor.*

431

SCHOOL NURSE PRACTICUM

Essentials of school health, school nursing, and health promotion. These concepts serve as a basis for the development of an understanding of the role of the school with the opportunity to function in the role of the school nurse. It is a course built on the culmination of knowledge obtained in previous nursing courses and nursing experiences. *210 hours clinical and seminar. Prerequisite: OPEN TO SCHOOL NURSE CANDIDATES who have met all other requirements for certification and have obtained departmental approval. Must have a valid Pennsylvania RN license.*

432

NURSING RESEARCH I

Introduction to the theory and process of research with emphasis on critical analysis of research and the development of a research proposal. *Two hours of lecture for 1/2 unit of credit. Prerequisites: Statistics, successful completion of NURS 331, 333, or consent of instructor. Not open to students who have completed NURS 435. Open to non-nursing majors.*

433

NURSING RESEARCH II

Implementation of the research process. Proposals submitted in NURS 432 will provide the basis for data collection, analysis and reporting of research findings. Continued development of critical analysis skills. *Two hours of lecture for 1/2 unit of credit. Prerequisite: NURS 432 or consent of instructor. Not open to students who have completed*

NURS 435. Open to non-nursing majors with consent of instructor.

435

RESEARCH IN NURSING

Expansion of theoretical basis of research methodology with emphasis on analyzing, criticizing, and interpreting nursing research. Development and implementation of a research proposal focusing on a nursing problem. *Four hours of lecture. 1 unit. Prerequisites: statistics, NURS 331 and 333, or consent of instructor. Open to non-nursing majors.*

438

HIGH ACUITY NURSING

Combines conceptual foundations and clinical decision making regarding the care of high acuity patients. Designed to bridge the gap between core medical surgical content and more advanced critical care concepts. *Three hours of lecture and 3.5 hours of clinical lab. 1 unit of credit. Prerequisite: NURS 339 or consent of instructor.*

439

NURSING CARE IN THE COMMUNITY

Overview of the role of the community health nurse in a variety of community and mental health venues. Discussion of the history and future of community health nursing including attributes of practice. Health and wellness promotion; health teaching; economic political, legal and ethical influences; environmental issues; epidemiology; communicable disease and vulnerable populations (including the psychiatric or mental health client) will be addressed. Focus is on the application and integration of health and wellness concepts. *Three hours lecture and 7 hours clinical laboratory. 1 1/4 units. Prerequisites: NURS 440, 438, or consent of instructor.*

440

NURSING CARE OF THE EMOTIONALLY TROUBLED INDIVIDUAL AND FAMILY

Examination of disturbed human relationships with focus on intrapsychic, interpersonal, and physiologic etiology. Emphasis on ad-

vanced therapeutic nurse-patient relationships within the context of family, community, and health care systems. *Three hours of lecture and 7 hours clinical laboratory. 1 unit. Prerequisites: NURS 331, 333, 339, and 340.*

441**COMPREHENSIVE NURSING CARE**

Culminating nursing course with focus on leadership and management issues in health care. Seminars provide opportunities for students to share commonalities and unique aspects of professional practice. A concentrated clinical practicum will provide students the opportunity to integrate practice skills and course concepts. *Three hours of lecture and 128 hours of clinical laboratory. 1 1/4 units. Prerequisites: NURS 438 and 440.*

442**PROFESSIONAL ISSUES**

An analysis of nursing issues in the context of the historical background of the profession, the social forces which influence nursing, and nursing's impact upon society. *Two-hour seminar. 1/2 unit of credit. Prerequisite: Senior standing or consent of instructor.*

443**TOPICS IN NURSING**

Selected topic courses in nursing designed to permit students to pursue subjects which, because of their specialized nature, may not be offered on a regular basis. *1/2 unit of credit. May be repeated for credit with departmental permission. Prerequisite: Senior standing or consent of instructor.*

470-479**INTERNSHIP (See index)****N80-N89****INDEPENDENT STUDY IN NURSING**

An opportunity to develop and implement an individual plan of study under faculty guidance.

490-491**INDEPENDENT STUDIES FOR
DEPARTMENTAL HONORS (See index)****PHILOSOPHY (PHIL)**

Professors: Griffith, Whelan

Assistant Professor: Herring (Chairperson)

The study of philosophy develops a critical understanding of the basic concepts and presuppositions around which we organize our thought in morality, law, religion, science, education, the arts and other human endeavors. A major in philosophy, together with other appropriate courses, can provide an excellent preparation for policy-making positions of many kinds, for graduate study in several fields, and for careers in education, law, and the ministry.

The major in philosophy requires eight courses including PHIL 223, 224, 440, and at least four others numbered 225 or above.

PHIL 340 can be counted toward the major only once.

The following courses, when scheduled as W courses, count toward the writing intensive requirement: PHIL 216, 217, 218, 219, 301, 332, 333, 334, 335, 336, 340.

Students interested in teacher certification should refer to the Department of Education on page 96.

Minors

The Philosophy Department offers three minors. (1) A minor in *philosophy* consists of any four philosophy courses numbered 220 or above, or any five philosophy courses which include three numbered 220 or above. (2) A minor in *philosophy and law* consists of four courses from PHIL 224, 225, 334, 335, 337, 340 and independent studies. (3) A minor in *philosophy and science* consists of four courses from PHIL 223, 225, 333, 340 and independent studies. Since topics in PHIL 340 and independent studies vary, these courses may count toward a minor only if they are approved by the department.

105

PRINCIPLES OF CRITICAL THINKING

An introduction to the elements of critical thinking centered on developing the skills necessary to recognize, describe, and evaluate arguments. *Not open to juniors and seniors except with consent of instructor.*

114

PHILOSOPHY AND PERSONAL CHOICE

An introductory philosophical examination of a number of contemporary moral issues which call for personal decision. Topics often investigated include: the "good" life, obligation to others, sexual ethics, abortion, suicide and death, violence and pacifism, obedience to the law, the relevance of personal beliefs to morality. Discussion centers on some of the suggestions philosophers have made about how to make such decisions. *Not open to juniors and seniors except with consent of instructor.*

115

PHILOSOPHY AND PUBLIC POLICY

An introductory philosophical examination of the moral and conceptual dimensions of various contemporary public issues, such as

the relation of ethics to politics and the law, the enforcement of morals, the problems of fair distribution of goods and opportunities, the legitimacy of restricting the use of natural resources, and the application of ethics to business practice. Discussion centers on some of the suggestions philosophers have made about how to deal with these issues. *Not open to juniors and seniors except with consent of instructor.*

140

CENTRAL PROBLEMS IN PHILOSOPHY

A study of several central philosophical problems, such as the problem of free will and determinism, the relationship between mind and body, the nature and limits of human knowledge, arguments about the existence of God, and the problem of personal identity. *Not open to juniors and seniors except with consent of instructor.*

215

PHILOSOPHICAL ISSUES IN COMMUNICATION

An introduction to the foundations of communication. Theories of truth and meaning are illustrated by means of practical examples, with special attention given to the issue of objectivity and bias in communication.

216

PHILOSOPHICAL ISSUES IN BUSINESS

A systematic and philosophically informed consideration of some typical moral problems faced by individuals in a business setting, and a philosophical examination of some common moral criticisms of the American business system.

217

PHILOSOPHICAL ISSUES IN EDUCATION

An examination of the basic concepts involved in thought about education, and a consideration of the various methods for justifying educational proposals. Typical of the issues discussed are: Are education and

indoctrination different? What is a liberal education? Are education and schooling compatible? What do we need to learn?
Alternate years.

218

PHILOSOPHICAL ISSUES IN CRIMINAL JUSTICE

A philosophical examination of some important controversies which arise in connection with the American criminal justice system. Typically included are controversies about the nature and purpose of punishment, the proper basis for sentencing, the correct understanding of criminal responsibility, and the rationale and extent of our basic human rights with respect to the criminal law.

219

PHILOSOPHICAL ISSUES IN HEALTH CARE

An investigation of some of the philosophical issues which arise in therapy and in health research and planning. Topics typically include euthanasia, confidentiality, informed consent, behavior control, experimentation on humans and animals, abortion, genetic engineering, population control, and distribution of health care resources.

223

HISTORY OF SCIENCE AND METAPHYSICS

An historical survey of the attempt to understand the physical universe. Particular attention is paid to common origins of philosophy and science in the works of the ancient Greek philosophers, to the question of how scientific and philosophical thinking differs from mythological and technological thinking, to the rationalism-empiricism dispute in science and metaphysics, and to the interaction between philosophy and science in formulating fundamental questions about the physical universe and in developing and criticizing concepts designed to answer them.

224

HISTORY OF SOCIAL AND POLITICAL PHILOSOPHY

An historical survey of the most important social and political philosophers from Socrates to Marx. Special attention is paid to the relationship between ethics and politics as seen by Plato and Aristotle and to the social contract theories of Hobbes, Locke, and Rousseau.

225

SYMBOLIC LOGIC

A study of modern symbolic logic and its application to the analysis of arguments. Included are truth-functional relations, the logic of propositional functions, and deductive systems. Attention is also given to various topics in the philosophy of logic.
Alternate years.

301

ANCIENT GREEK PHILOSOPHY

A critical examination of the ancient Greek philosophers, with particular emphasis on Plato and Aristotle. *Prerequisite: Two courses in philosophy or consent of instructor.*
Alternate years.

332

PHILOSOPHY OF RELIGION

A philosophical examination of religion. Included are such topics as the nature of religious discourse, arguments for and against the existence of God, and the relation between religion and science. Readings from classical and contemporary sources. *Prerequisite: Students without previous study in philosophy must have consent of instructor.*
Alternate years.

333

PHILOSOPHY OF NATURAL SCIENCE

A consideration of philosophically important conceptual problems arising from reflection about natural science, including such topics as the nature of scientific laws and theories, the character of explanation, the

importance of prediction, the existence of "non-observable" theoretical entities such as electrons and genes, the problem of justifying induction, and various puzzles associated with probability. *Prerequisite: Students without previous study in philosophy must have consent of instructor. Alternate years.*

334 CONTEMPORARY POLITICAL PHILOSOPHY

A close reading of four or five defining works of contemporary political philosophy, beginning with *A Theory of Justice* by John Rawls. *Prerequisite: Students without previous study in philosophy must have consent of instructor. Alternate years.*

335 ETHICAL THEORY

An inquiry about the grounds for distinguishing morally right from morally wrong actions. Central to this course is critical consideration of important theories, such as relativism, utilitarianism, and subjectivism, as well as historically important theorists, such as Aristotle, Mill, and Kant. *Prerequisite: Students without previous study in philosophy must have consent of instructor. Alternate years.*

336 CONTEMPORARY MORAL PHILOSOPHY

A close reading of four or five centrally important works of contemporary moral philosophy. *Prerequisite: Students without previous study in philosophy must have consent of instructor. Alternate years.*

337 PHILOSOPHY OF LAW

An introduction to the philosophy of law using both classical and contemporary sources. General theories concerning the nature of law, as well as philosophical issues which arise primarily within a legal context, will be discussed. *Prerequisite: Students*

without previous study in philosophy must have consent of instructor. Alternate years.

340

SPECIAL TOPICS

Study of selected philosophical problems, texts, writers, or movements. Recent topics include ethical obligations to animals, lying and lawbreaking, environmental ethics, research on human subjects, and artificial intelligence. *Students without previous study in philosophy must have consent of instructor. With consent of the instructor, this course may be repeated for credit.*

440

PHILOSOPHICAL RESEARCH AND WRITING

In-depth instruction in both the independent and the cooperative aspects of philosophical research and writing. Each student undertakes an approved research project and produces a substantial philosophical paper. *Open only to, and required of, senior philosophy majors.*

470-479

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

Recent independent studies in philosophy include Nietzsche, moral education, Rawls' theory of justice, existentialism, euthanasia, Plato's ethics, and philosophical aesthetics.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

PHYSICS

(See Astronomy/Physics)



PHYSICAL EDUCATION

Instructor: Holmes (Chairperson)

Part-time Instructor: Dill

PHYSICAL ACTIVITIES, WELLNESS, AND COMMUNITY SERVICE

This program is designed to promote students' physical welfare, health awareness, and encourage a sense of civic responsibility. Students must successfully complete any combination of two semesters of course work selected from the following:

1. Designated Physical Activities courses,
2. Designated varsity athletics,
3. Designated wellness courses,
4. Designated community service projects,
5. Designated military science courses (011, 021, 031, 041).

PHYSICAL ACTIVITY COURSES (PHED)

102

PHYSICAL EDUCATION ACTIVITIES

This topics course satisfies one-half semester of physical education. Coeducational classes meet twice a week with basic instruction in fundamentals, knowledge, and appreciation of various sports. Emphasis is on the potential use of activities as recreational and leisure time interests.

105

PHYSICAL EDUCATION ACTIVITIES

This topics course satisfies one semester of physical education. Coeducational classes meet twice a week with basic instruction in fundamentals, knowledge, and appreciation of various sports. Emphasis is on the potential use of activities as recreational and leisure time interests.

110 - 125

VARSITY ATHLETICS

Students who compete on a varsity sports team may register for a semester of Physical Activity during the semester listed. Two full seasons must be completed to satisfy the Physical Activity requirement. **It is the student's responsibility to withdraw from the course should they not complete the season.**

110 - BASKETBALL

111 - CROSS COUNTRY

112 - FOOTBALL

113 - GOLF

114 - SOCCER

115 - SOFTBALL

116 - SWIMMING

117 - TENNIS

118 - TRACK

119 - VOLLEYBALL

120 - WRESTLING

121 - LACROSSE

WELLNESS (WELL)

102

TOPICS IN WELLNESS

This topics course satisfies one-half semester of wellness study. Wellness courses meet two hours per week covering various topics that may include Stress Management, Preventing Communicable Diseases, Personal Health and Wellness, and other current health issues. These courses promote student wellness during their stay at Lycoming as well as their post graduate years. *This course may be repeated with the same topics only with departmental consent.*

105

TOPICS IN WELLNESS

This topics course satisfies one semester of

wellness study. Wellness courses meet two hours per week covering various topics that may include Stress Management, Preventing Communicable Diseases, Personal Health and Wellness, and other current health issues. These courses promote student wellness during their stay at Lycoming as well as their post graduate years. *This course may be repeated with the same topics only with departmental consent.*

106**FIRST AID/CPR**

This course satisfies one semester of wellness study. This course will prepare students to recognize emergencies and make appropriate decisions for first aid care. Also included are an emphasis on safety and assessment of personal habits to reduce risk of injury and illness. American Red Cross First Aid and CPR certifications are earned upon successful completion of the course.

COMMUNITY SERVICE (COMS)

These courses require 2-3 hours per week in a combination of seminars and agency placement.

105**COMMUNITY SERVICE I**

This course satisfies one semester of community service. An experiential learning opportunity accomplished in conjunction with local agencies or college departments. The outcome of such service will promote students' personal and social development as well as civic responsibility. *Students must pre-register for this course. May not be repeated.*

106**COMMUNITY SERVICE II**

This course satisfies one semester of community service. Students may elect to enroll in a second semester of community service to satisfy the graduation requirement. This will require the student to be engaged in a somewhat more sophisticated level of learning and service. *Students must pre-register for this course. Prerequisite: COMS 105.*



POLITICAL SCIENCE (PSCI)

Professors: Roskin (Chairperson)

Visiting Professor of Legal Studies: Raup

The major is designed to provide a systematic understanding of government and politics at the international, national, state, and local levels. Majors are encouraged to develop their skills to make independent, objective analyses which can be applied to the broad spectrum of the social sciences.

Although the political science major is not designed as a vocational major, students with such training may go directly into government service, journalism, teaching, or private administrative agencies. A political science major can provide the base for the study of law, or for graduate studies leading to administrative work in federal, state, or local governments, international organizations, or college teaching.

Students seeking certification to teach secon-

dary school social studies may major in political science but should consult their advisors and the education department.

Students interested in teacher certification should refer to the Department of Education on page 96.

A major in Political Science consists of eight courses as follows: PSCI 106, PSCI 400; two courses in American Politics from PSCI 111, 223, 333, 347, 448; one course in Legal Studies from PSCI 331, 332, 334, 335, 436; two courses in World Politics from PSCI 221, 225, 243, 327, 439; and one additional PSCI course. Prospective majors are encouraged to take PSCI 106 in their freshman year. An exemption will be granted only if it strengthens the student's program.

The following courses have been approved to be offered as cultural diversity courses: PSCI 221, 327. Students must check semester class schedules to determine which courses are offered as "D" courses for that semester.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: PSCI 334, 400. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minors

For non-majors, the department offers three minors: a minor in Political Science consists of any four courses numbered 200 or above from areas A to C; a minor in World Politics consists of four courses selected from area C; and a minor in Legal Studies consists of four courses in area B. Students are encouraged to consult with department members on the selection of a minor.

106

INTRODUCTION TO POLITICS

The U.S. political system in comparative perspective. Basic concepts, vocabulary, and examples to ground students in the objective analysis of politics.

111

STATE AND LOCAL GOVERNMENT

An examination of the general principles, major problems, and political processes of the states and their subdivisions, together with their role in a federal type of government.

210

COMMUNICATION AND SOCIETY

Reviews and critiques the impact of the mass media on American society. Consideration of how the media form attitudes, nominate and elect candidates, cover news, and monitor governmental activities as well as possible remedies to media-related problems. *Alternate years.*

221

COMPARATIVE POLITICS AND GEOGRAPHY

The politics and geography of nations in Europe, Asia, the Middle East, Africa, And South American in a search for comparisons and patterns. Includes history, institutions, cultures, borders, regions, and map exercises.

223

PRESIDENCY AND CONGRESS

The constitutional roles, campaign styles, and interactions of the U.S. presidency and congress. Special attention is given presidents, senators, and congresspersons who substantially contribute to the democratic process. *Alternate years.*

225

INTERNATIONAL RELATIONS

The basic factors and concepts of international relations, such as international systems, national interest and security, wars, decolonization, nationalism, economic development, trade blocs, and international law and organizations.

243

THE VIETNAM WAR

The background and context of the war, how the United States got involved, the military lessons, and the war's impact on U.S. society, politics, and economy. *Alternate years.*

327**WORLD CRISES**

The study of selected current major international problems, such as the Middle East, Balkans, East Asia, India-Pakistan, or whatever new dangers arise. *Alternate years.*

331**CIVIL RIGHTS AND LIBERTIES**

What are our rights and liberties as Americans? What should they be? A frank discussion of the nature and scope of the constitutional guarantees. First Amendment rights, the rights of criminal suspects and defendants, racial and sexual equality, and equal protection of the laws. Students will read and brief the more important Supreme Court decisions. *Prerequisite: junior or senior standing, or consent of instructor.*

332**COURTS AND THE CRIMINAL JUSTICE SYSTEM**

The course consists of two components: criminal law and criminal procedure. Criminal procedure carefully explores constitutional law and procedural rules which dominate court handling of criminal cases. Criminal law explores concepts relating to criminal responsibility and the establishment of selected offenses. Emphasis is placed on "hot button" issues in the field: balancing protection of fundamental freedoms against society's need to solve and prevent crime; plea negotiations; the politicizing of the criminal justice system; mandatory sentencing schemes; management challenges to fast handling of criminal cases; the changing line between juvenile and adult criminal court; wisdom of using criminal punishment in an attempt to control some forms of behavior. There will be two field trips to court proceedings. *Prerequisite: junior or senior standing, or consent of instructor.*

333**BUREAUCRACY AND PUBLIC ADMINISTRATION**

The business of making government work at the administrative level. The organizational structure, relevant laws and court cases, and legislative oversight of federal, state, and local public bureaucracy. *Alternate years.*

334**LEGAL RESEARCH AND WRITING**

Students learn to perform legal research with realistic problems in civil and criminal cases drawing upon statutory, constitutional, regulatory, procedural and common law. They will write briefs and memoranda based upon the research in the form expected of legal interns and paralegal personnel. Some classes may be held at the Lycoming County Courthouse law library. *Alternate years.*

Prerequisite: junior or senior standing.

335**LAW AND SOCIETY**

An examination of the nature, sources, functions, and limits of law as an instrument of political and social control. Included for discussion are legal problems pertaining to the family, crime, deviant behavior, poverty, and minority groups. *Prerequisite: junior or senior standing, or consent of instructor.*

347**WOMEN AND POLITICS**

The historical, philosophical, and practical context and conduct of women in a variety of political roles. This course considers both elective and nonelective activities, and includes analyses of women's issues currently on legislative and court agendas. *Alternate years.*

400**POLITICAL ANALYSIS**

A capstone course required for majors in Political Science normally taken in their senior year. Students will integrate their knowledge of political phenomena and deepen their methodological sophistication by

applying several analytical approaches to a series of case studies. *Open to non-majors with permission of instructor.*

436 MASS MEDIA LAW AND REGULATION

An examination of the legal structure and the system by which mass communication is controlled in this society. The forces which shape, influence, and make policy will be considered. *Prerequisite: junior or senior standing, or consent of instructor.*

439 AMERICAN FOREIGN POLICY

The U.S. role in the world in geographic, strategic, historical, and ideological perspectives, plus an examination of the domestic forces shaping U.S. policy. *Alternate years.*

448 PUBLIC OPINION AND POLLING

A course dealing with the general topic and methodology of polling. Content includes exploration of the processes by which people's political opinions are formed, the manipulation of public opinion through the uses of propaganda, and the American response to politics and political issues. *Alternative years.*

470-479 INTERNSHIPS (See index)

Students may receive academic credit for serving as interns in structured learning situations with a wide variety of public and private agencies and organizations. Students have served as interns with the Public Defender's Office, the Lycoming County Court Administrator, and the Williamsport City government.

N80-N89 INDEPENDENT STUDY (See index)

Current studies relate to elections—local, state, and federal—while past studies have included Soviet and world politics.

490-491 INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)



PSYCHOLOGY (PSY)

Professor: Ryan (Chairperson)

Associate Professor: Berthold

Assistant Professors: Kelley, Olsen

Visiting Assistant Professor: Beery

Visiting Instructors: Cimini, Ellis, Mitchell

The major provides training in both theoretical and applied psychology. It is designed to meet the needs of students seeking careers in psychology or other natural or social sciences. It also meets the needs of students seeking a better understanding of human behavior as a means of furthering individual and career goals in other areas. Psychology majors and others are urged to discuss course selections in psychology with members of the department to help insure appropriate course selection.

A major consists of 32 semester hours in psychology, including PSY 110, 431, 432, and 436. Statistics also is required.

Students interested in teacher certification should refer to the Department of Education on page 96.

The following course has been approved to be offered as a cultural diversity course: PSY 341. Students must check semester class schedules to determine which courses are offered as "D" courses for that semester.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: PSY 225, 324, 333, 431, 432, and 436. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in psychology consists of 20 semester hours in psychology including PSY 110 and four other psychology courses (three of which must be numbered 200 or above) which must be approved by the department.

101

TOPICS

Exploration of a specific basic or applied topic in psychology. Different topics will be explored different semesters. Potential topics include the psychology of disasters, applied behavioral psychology, and organizational psychology. The course is open to elementary and advanced undergraduates. *No Prerequisites. One-half unit of credit. May be repeated once for credit with departmental permission. May not be used to satisfy distribution or major requirements.*

110

INTRODUCTORY PSYCHOLOGY

An introduction to the empirical study of human and other animal behavior. Areas considered may include: learning, personality, social, physiological, sensory, cognition, and developmental.

112

GROUP PROCESSES AND INTERPERSONAL COMMUNICATION

An introduction to research and theories on small group formation, structure, and performance. Topics include group communication, conformity, leadership, conflict, and decision-making. Emphasis will be placed upon applying principles of group dynamics to different types of groups. *Prerequisite: PSY 110 or consent of instructor. May term only.*

116

ABNORMAL PSYCHOLOGY

An introduction to the patterns of deviant behavior with emphasis on cause, function, and treatment. The various models for the conceptualization of abnormal behavior are critically examined. *Prerequisite: PSY 110.*

117

DEVELOPMENTAL PSYCHOLOGY

A study of the basic principles of human growth and development throughout the life span. *Prerequisite: PSY 110.*

118

ADOLESCENT PSYCHOLOGY

The study areas will include theories of adolescence; current issues raised by as well as about the "generation of youth"; research findings bearing on theories and issues of growth beyond childhood, and self-exploration. *Prerequisite: PSY 110.*

138

EDUCATIONAL PSYCHOLOGY

An introduction to the empirical study of the teaching-learning process. Areas considered may include educational objectives, pupil and teacher characteristics, concept learning, problem-solving and creativity, attitudes and values, motivation, retention and transfer, evaluation and measurement. *Prerequisite: PSY 110 or consent of instructor.*

220**THE PSYCHOLOGY OF CLOSE RELATIONSHIPS**

This course will review current theory and research on love. The progress of close, interpersonal relationships from initiation to termination will be discussed. In addition, the relation between love and sex will be explored, and current research on sexuality reviewed. *Prerequisite: PSY 110.*

225**INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY**

The application of the principles and methods of psychology to selected industrial and organizational situations. *Prerequisite: PSY 110 or consent of instructor.*

237**COGNITION**

An in-depth examination of the field of human cognition. Topics include perception, attention, short and long term memory, reading comprehension, problem solving and decision making. Emphasis will be placed on understanding the scientific nature of the discipline. *Prerequisite: PSY 110.*

239**BEHAVIOR MODIFICATION**

A detailed examination of the applied analysis of behavior. Focus will be on the application of experimental method to the individual clinical case. The course will cover targeting behavior, base-rating, intervention strategies, and outcome evaluation. Learning-based modification techniques such as contingency management, counter-conditioning, extinction, discrimination training, aversive conditioning, and negative practice will be examined. *Prerequisite: PSY 110 or consent of instructor.*

240**PSYCHOLOGY OF ADULT PERSONAL ADJUSTMENT**

A study of psychological theories and research on coping with normal developmental changes and common problems of

adulthood. Focus will be upon adult transitions, stress management, intimate relationships, sexuality, parenting skills, and work adjustment. *Prerequisite: PSY 110.*

310**FORENSIC PSYCHOLOGY**

An examination of psychological theories and research on topics related to psychology and law. Areas covered include forensic pathology, psychological theories of criminal behavior, eyewitness testimony, jury decision making, expert witnesses, the insanity defense, and criminal profiling analysis. *Prerequisites: PSY 110 and 116.*

324**SOCIAL PSYCHOLOGY**

The scientific exploration of interpersonal communication and behavior. Topics include attitudes and attitude change, attraction and communication, social perception and social influence, prosocial and antisocial behavior and group processes. *Prerequisite: PSY 110.*

333**PHYSIOLOGICAL PSYCHOLOGY**

An introduction to the physiological psychologist's method of approach to the understanding of behavior as well as the set of principles that relate the function and organization of the nervous system to the phenomena of behavior. *Prerequisite: PSY 110 or consent of instructor.*

334**PRINCIPLES OF MEASUREMENT**

Psychometric methods and theory, including scale transformation, norms, standardization, validation procedures, and estimation of reliability. *Prerequisites: PSY 110 and statistics.*

341**PSYCHOLOGY OF WOMEN**

A review of contemporary theory and research on the psychology of gender differences. Special topics include sex differences in achievement, power, and communication;

sex-role stereotypes; beliefs about masculinity and femininity; and gender influences on mental health. *Prerequisite: PSY 110.*

410**DYSFUNCTIONAL FAMILIES AND CHILD DEVELOPMENT**

This course will explore the relations between a variety of types of family dysfunctions and child development and psychopathology. Specifically, topics in child abuse, neglect, sexual abuse, and children from violent homes, alcoholic homes, and homes with mentally ill parents will be studied. The course will focus on empirical literature about dysfunctional families and child development, biographical and political perspectives. *Prerequisite: PSY 116 and 117, or consent of instructor.*

431**EXPERIMENTAL PSYCHOLOGY**

A study of the scientific method, experimental design and the application of statistics to psychology. Emphasis will be placed on understanding the place of research in the field of psychology. *Prerequisites: PSY 110, 431 and statistics.*

432**SENSATION AND PERCEPTION**

The examination of psychophysical methodology and basic neurophysiological methods as they are applied to the understanding of sensor processes. *Prerequisites: PSY 110 and statistics.*

436**PERSONALITY THEORY**

A review of the major theories of personality development and personality functioning. In addition to covering the details of each theory, the implications and applications of each theory are considered. This course is best taken by Psychology majors in the senior year, because it integrates material from diverse areas of psychology. *Prerequisite: PSY 110.*

448-449**PRACTICUM IN PSYCHOLOGY**

An off-campus experience in a community setting offering psychological services, supplemented with classroom instruction and discussion. PSY 448 covers the basic counseling skills, while PSY 449 covers the major theoretical approaches to counseling. *Prerequisite: Consent of instructor.*

470-479**INTERNSHIP (See index)**

Internships give students an opportunity to relate on-campus academic experiences to society in general and to their post-baccalaureate objectives in particular. Students have, for example, worked in prisons, public and private schools, county government, and for the American Red Cross.

N80-N89**INDEPENDENT STUDY (See index)**

Independent study is an opportunity for students to pursue special interests in areas for which courses are not offered. In addition, students have an opportunity to study a topic in more depth than is possible in the regular classroom situation. Studies in the past have included child abuse, counseling of hospital patients, and research in the psychology of natural disasters.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

Honors in psychology requires original contributions to the literature of psychology through independent study. The most recent honors project was a study of the effect of self-esteem on attitude-behavior consistency.



RELIGION (REL)

Professor: Hughes (Chairperson)

Assistant Professor: Johnson

Instructor: Knauth

A major consists of 10 courses, including REL 113, 114, and 120. At least seven courses must be taken in the department. The following courses may be counted toward fulfilling the major requirements: GRK 221 and 222, HEBR 221 and 222, HIST 340 and 416, PHIL 332, and SOC 333.

The following courses have been approved to be offered as cultural diversity courses: REL 110, 224, 225, 226, 228. Students must check semester class schedules to determine which courses are offered as "D" courses for that semester.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: REL 230, 331, 337.

Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minors

A minor in religion consists of one course from REL 110, 113 or 114 and four religion courses numbered 200 or above.

An interdisciplinary minor in Biblical Languages requires the completion of GRK 221, 222 and HEBR 221 and 222.

110

INTRODUCTION TO RELIGION

Designed for the beginning student, this course examines what it means to be religious. Some of the issues are the definition of religion, the meaning of symbolism, concepts of God, ecstatic phenomena. Specific attention will be devoted to the current problem of cults and religious liberty.

113**OLD TESTAMENT FAITH AND HISTORY**

A critical examination of the literature within its historical setting and in the light of archaeological findings to show the faith and religious life of the Hebrew-Jewish community in the Biblical period, and an introduction to the history of interpretation with an emphasis on contemporary Old Testament criticism and theology.

114**NEW TESTAMENT FAITH AND HISTORY**

A critical examination of the literature within its historical setting to show the faith and religious life of the Christian community in the Biblical period, and an introduction to the history of interpretation with an emphasis on contemporary New Testament criticism and theology.

119**RELIGION AND POPULAR CULTURE**

An examination of the interaction of religion and culture in an historical perspective followed by a direct analysis of the ethical and religious issues raised by contemporary American popular culture. Readings include artistic and social-scientific as well as ethical and religious approaches to popular culture.

120**DEATH AND DYING**

A study of death from personal, social and universal standpoints with emphasis upon what the dying may teach the living. Principal issues are the stages of dying, bereavement, suicide, funeral conduct, and the religious doctrines of death and immortality. Course includes, as optional, practical projects with terminal patients under professional supervision. *Only one course from the combination of REL 120 and 121 may be used for distribution.*

121**AFTER DEATH AND DYING**

An examination of the question of life after death in terms of contemporary clinical studies, the New Testament resurrection narratives, the Asian doctrine of reincarnation, and the classical theological beliefs of providence and predestination. *REL 120 is recommended but not required. Only one course from the combination of REL 120 and 121 may be used for distribution.*

222**PROTESTANTISM IN THE MODERN WORLD**

An examination of Protestant thought and life from Luther to the present against the backdrop of a culture rapidly changing from the 17th century scientific revolution to Marxism, Darwinism, and depth psychology. Special attention will be paid to the constant interaction between Protestantism and the world in which it finds itself.

223**THE BACKGROUNDS OF CHRISTIANITY**

A study of the historical, cultural, and religious background of the formation of Christianity and the antecedents of Christian belief and practice in post-exilic Judaism and in Hellenism.

224**JUDAISM AND ISLAM**

An examination of the rise, growth, and expansion of Judaism and Islam with special attention given to the theological contents of the literatures of these religions as far as they are normative in matters of faith, practice, and organization. Also, a review of their contributions to the spiritual heritage of mankind.

225**ORIENTAL RELIGION**

A phenomenological study of the basic content of Hinduism, Buddhism, and Chinese Taoism with special attention to social and political relations, mythical and aesthetic forms, and the East-West dialogue.

226**BIBLICAL ARCHAEOLOGY**

A study of the role of archaeology in reconstructing the world in which the Biblical literature originated with special attention given to archaeological results that throw light on the clarification of the Biblical text. Also, an introduction to basic archaeological method and a study in depth of several representative excavations along with the artifacts and material culture recovered from different historical periods.

227**HISTORY AND THEOLOGY
OF THE EARLY CHURCH**

An examination of the life and theology of the church from the close of the New Testament to the fifth century. Special attention will be given to the struggles of the church with heretical movements, the controversies concerning the person and nature of Christ, and the encounter of the church with the Roman Empire.

228**HISTORY AND CULTURE
OF THE ANCIENT NEAR EAST**

A study of the history and culture of Mesopotamia, Anatolia, Syria-Palestine, and Egypt from the rise of the Sumerian culture to Alexander the Great. Careful attention will be given to the religious views prevalent in the ancient Near East as far as these views interacted with the culture and faith of the Biblical tradition.

230**PSYCHOLOGY OF RELIGION**

A study into the broad insights of psychology in relation to the phenomena of religion and religious behavior. The course concentrates on religious experience or manifestations rather than concepts. Tentative solutions will be sought to questions such as: What does it feel like to be religious or to have a religious experience? What is the religious function in human development? How does one think psychologically about theological problems?

331**CHRISTIAN SOCIAL ETHICS**

A study of Christian ethics as a normative perspective for contemporary moral problems with emphasis upon the interaction of law and religion, decision-making in the field of biomedical practice, and the reconstruction of society in a planetary civilization.

332**CONTEMPORARY PROBLEMS IN
CHRISTIAN SOCIAL ETHICS**

An examination of the approach of religion and other disciplines to an issue of current concern; current topics include the theological significance of law, the ethics of love, and the Holocaust. *May be repeated for credit if the topic is different from one previously studied.*

337**BIBLICAL TOPICS**

An in-depth study of Biblical topics related to the Old and New Testaments. Topics include prophecy, wisdom literature, the Dead Sea Scrolls, the teachings of Jesus, Pauline theology, Judaism and Christian origins, redaction criticism - the way the Synoptic Gospels and John give final form to their message. *Course will vary from year to year and may be repeated for credit once if the topic is different from one previously studied.*

341**CONTEMPORARY RELIGIOUS ISSUES**

A study of the theological significance of some contemporary intellectual developments in Western culture. The content of this course will vary from year to year. Subjects studied in recent years include the theological significance of Freud, Marx, and Nietzsche; Christianity and existentialism; theology and depth psychology; the religious dimension of contemporary literature.

342**THE NATURE AND MISSION
OF THE CHURCH**

A study of the nature of the Church as "The People of God" with reference to the Biblical, Protestant, Orthodox, and Roman Catholic traditions.

401**FIELD ARCHAEOLOGY**

Participation in an archaeological dig in the Near East. Instruction in excavation techniques, recording and the processing of artifacts. A survey of excavation and research and the use of archaeology as a tool for elucidating historical and cultural changes. *Special fees apply. May Term or Summer Sessions only.*

470-479**INTERNSHIP (See index)**

Interns in religion usually work in local churches under the supervision of the pastor and a member of the faculty.

N80-N89**INDEPENDENT STUDY (See index)**

Current study areas are in the Biblical languages, Biblical history and theology, Biblical archaeology, comparative religions, and the ethics of technology.

490-491**INDEPENDENT STUDY FOR
DEPARTMENTAL HONORS (See index)****GREEK (GRK)**

Greek is not offered as a major. An interdisciplinary minor in Biblical Languages requires the completion of GRK 221, 222 and HEBR 221, 222.

101-102**NEW TESTAMENT****GRAMMAR AND READINGS**

Fundamentals of New Testament Greek grammar and readings of selected passages of the Greek text. *Does not satisfy humanities requirement.*

221**READINGS IN THE SYNOPTIC GOSPELS**

A comparative study of the synoptic tradition in Greek. *Prerequisite: GRK 102 or equivalent. Does not satisfy humanities requirement.*

222**READINGS IN THE PAULINE EPISTLES**

Selected readings from the letters of Paul in Greek. *Prerequisite: GRK 221 or equivalent. Does not satisfy humanities requirement.*

HEBREW (HEBR)

Hebrew is not offered as a major. An interdisciplinary minor in Biblical Languages requires the completion of GRK 221, 222 and HEBR 221, 222.

101-102**OLD TESTAMENT****GRAMMAR AND READINGS**

Fundamentals of Old Testament Hebrew grammar and readings of selected passages of the Hebrew text. *Does not satisfy humanities requirement.*

221**READINGS IN OLD****TESTAMENT NARRATIVE**

A critical reading of the Hebrew text of selected narrative portions of the Old Testament with special attention being given to exegetical questions. The text read varies



SCHOLAR PROGRAM (SCHOL)

Professor: Boerckel (Director)

The Lycoming College Scholar Program is a special program designed to meet the needs and aspirations of highly motivated students of superior intellectual ability. The Lycoming Scholar satisfies the College distribution requirements, generally on a more exacting level and with more challenging courses than the average student. Lycoming Scholars also participate in special interdisciplinary seminars and in serious independent study culminating in a senior project.

301

LYCOMING SCHOLAR SEMINAR

Team taught interdisciplinary seminar held each semester under the direction of the Lycoming Scholar Council. May be repeated for credit. Completion of five semesters is required by the Scholar Program. *Prerequisite: Acceptance into the Lycoming Scholar Program. One-quarter unit of credit. Grade will be recorded as "A" or "F."*

450

SENIOR SEMINAR

During the senior year, Lycoming Scholars complete independent studies or departmental honors projects. These projects are presented to scholars and faculty in the senior seminar. *Non-credit course. Prerequisite: Acceptance into the Lycoming Scholar Program.*

from year to year. *Prerequisite: HEBR 102 or equivalent. Does not satisfy humanities requirement.*

222 READINGS IN THE PROPHETIC BOOKS AND WISDOM LITERATURE

A critical reading of the Hebrew text of selected portions of Old Testament prophecy and wisdom literature with special attention being given to exegetical questions. The text read varies from year to year. *Prerequisite: HEBR 221 or equivalent. Does not satisfy humanities requirement.*

SOCIOLOGY-ANTHROPOLOGY

(SOC)

Professor: Wilk (Chairperson)

Associate Professor: S. Alexander

Assistant Professor: Ross

The Sociology-Anthropology Department offers two tracks in the major. Both tracks introduce the students to the fundamental concepts of the discipline, and both tracks prepare the student for graduate school.

Track I emphasizes the theoretical aspects of sociology and anthropology. Track II emphasizes the application of sociology and anthropology to human services.

Track I - Sociology-Anthropology requires the core course sequence SOC 110, 114, 229, 330, 430, 444 and three other courses within the department with the exception of SOC 443. REL 226 may also be counted toward the major.

Track II - Human Services in a Socio-Cultural Perspective requires SOC 110, 222, 229, 330, 430, 443, and 444. In addition, students must select two courses from among the following: SOC 220, 221, 228, 300, 334, and 335. Students are also required to choose two units from the following courses: PSY 110, ECON 224, PSCI 333, and SOC 230. Recommended courses: ACCT 110, 226; SPAN 111, 112; HIST 126; and PHIL 334.

Majors in both tracks are encouraged to participate in the internship program.

Students interested in teacher certification should refer to the Department of Education on page 95.

The following courses have been approved to be offered as cultural diversity courses: SOC 229, 331, 334, 335, 336, 337. Students must check semester class schedules to determine which courses are offered as "D" courses for that semester.



The following courses have been approved to be offered as writing intensive courses and may be offered as such: SOC 222, 228, 229, 230, 331. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in sociology and anthropology consists of SOC 110 and four other SOC courses approved by the department, three of which must be numbered 220 or above.

110

INTRODUCTION TO SOCIOLOGY

An introduction to the problems, concepts, and methods in sociology today, including analysis of stratification, organization of groups and institutions, social movements, and deviants in social structure.

114

INTRODUCTION TO ANTHROPOLOGY

An introduction to the subfields of anthropology; its subject matter, methodology, and goals, examination of biological and cultural evolution, the fossil evidence for human

evolution, and questions raised in relation to human evolution. Other topics include race, human nature, primate behavior, and prehistoric cultural development.

220**MARRIAGE AND THE FAMILY**

The history, structure, and functions of modern American family life, emphasizing dating, courtship, factors in marital adjustment, and the changing status of family members.

Prerequisite: SOC 110 or consent of instructor.

221**JUVENILE DELINQUENCY**

A multidisciplinary approach to the study of the constellation of factors that relate to juvenile delinquency causation, handling the juvenile delinquent in the criminal justice system, treatment strategies, prevention, and community responsibility. *Prerequisite: SOC 110 or consent of instructor. Alternate years.*

222**INTRODUCTION TO HUMAN SERVICES**

This course is for students interested in learning about, or entering, the human services profession. It will review the history, the range, and the goals of human services together with a survey of various strategies and approaches to human problems. A twenty-hour community service component is an optional element of the course. *Prerequisite: SOC 110 and/or PSY 110; or consent of instructor.*

228**AGING AND SOCIETY**

Analysis of cross-cultural characteristics of the aged as individuals and as members of groups. Emphasis is placed upon media portrayals as well as such variables as health, housing, socio-economic status, personal adjustment, retirement, and social participation. Sociological, social psychological, and anthropological frames of reference are utilized

in analysis and description of aging and its relationship to the individual and society.

Prerequisite: SOC 110.

229**CULTURAL ANTHROPOLOGY**

An examination of cultural and social anthropology designed to familiarize the student with the analytical approaches to the diverse cultures of the world. The relevancy of cultural anthropology for an understanding of the human condition will be stressed. Topics to be covered include the nature of primitive societies in contrast to civilizations, the concept of culture and cultural relativism, the individual and culture, the social patterning of behavior and social control, an anthropological perspective on the culture of the United States.

230**SELF AND SOCIETY**

This course is concerned with the behavior of individuals who occupy positions in social structures, organizations and groups. The focus is on the behavior of individuals as it is controlled, influenced, or limited by the social environment; and the manner in which the behavior of individuals reacts upon, shapes and alters social structures and enters into the functioning of groups. This course will also explore symbolic interactionism, a major theoretical perspective in sociology which focuses primary attention on the way in which individuals define and continually redefine reality on the basis of social interaction.

Prerequisite: SOC 110 or consent of instructor.

300**CRIMINOLOGY**

Analysis of the sociology of law; conditions under which criminal laws develop; etiology of crime; epidemiology of crime, including explanation of statistical distribution of criminal behavior in terms of time, space, and social location. *Prerequisite: SOC 110 or consent of instructor.*

330**RESEARCH METHODS IN SOCIOLOGY-ANTHROPOLOGY**

In studying the research process in sociology-anthropology, attention is given to the process of designing and administering both qualitative and quantitative research. Students complete an original field work project in a public setting. Additionally, students will learn to compile and analyze quantitative data through a micro computer statistical software package. Different methodological skills considered include: field work, questionnaire construction, unobtrusive research, and program evaluation. The course must be taken in the junior year. *Prerequisite: SOC 110 and MATH 123.*

331**SOCIOLOGY OF WOMEN**

This course investigates the development of feminist social thinking throughout American history, gender role socialization, and women's roles in social institutions. The focus of the course is contemporary American society with an examination of the way in which gender is created and recreated through human activity, including institutionalized

gendered practices. An examination of the roles of women in several social institutions may include family, work, politics, law, and health. *Prerequisite: SOC 110. Alternate years.*

334**RACIAL AND CULTURAL MINORITIES**

Study of racial, cultural, and national groups within the framework of American cultural values. An analysis will include historical, cultural, and social factors underlying ethnic and racial conflict. Field trips and individual reports are part of the requirements for the course. *Prerequisite: SOC 110 or consent of instructor.*

335**CULTURE AND PERSONALITY**

Introduction to psychological anthropology, its theories and methodologies. Emphasis will be placed on the relationship between individual and culture, national character, cognition and culture, culture and mental disorders, and cross-cultural considerations of the concept of self. *Prerequisite: SOC 229 or consent of instructor.*



336**THE ANTHROPOLOGY
OF PRIMITIVE RELIGIONS**

The course will familiarize the student with the wealth of anthropological data on the religions and world views developed by primitive peoples. The functions of primitive religion in regard to the individual, society, and various cultural institutions will be examined. Subjects to be surveyed include myth, witchcraft, vision quests, spirit possession, the cultural use of dreams, and revitalization movements. Particular emphasis will be given to shamanism, transcultural religious experience, and the creation of cultural realities through religions. Both a social scientific and existential perspective will be employed. *Prerequisite: SOC 229 or consent of instructor.*

337**THE ANTHROPOLOGY OF
AMERICAN INDIANS**

An ethnographic survey of native North American Indian and Eskimo cultures, such as the Iroquois, Plains Indians, Pueblo, Kwakiutl, and Netsilik. Changes in native lifeways due to European contacts and United States expansion will be considered. Recent cultural developments among American Indians will be placed in an anthropological perspective.

430**SOCIAL PROBLEMS**

Building on the research skills acquired in SOC 330, students will complete an original quantitative research project on a topic of their own choosing. The theoretical emphasis of this course covers the social construction and life course of a social problem. Additionally, several social problems will be analyzed in depth. *Prerequisite: SOC 330.*

443**HUMAN SERVICES IN
HELPING INSTITUTIONS**

The course examines the organizational and conceptual context within which human

services are delivered in contemporary society. Subjects to be covered include ethnographic study of nursing homes, prisons, therapeutic communities, mental hospitals, and other human service institutions. The methodology of fieldwork will be explored so as to sensitize the student to the socio-cultural dimensions of helping environments and relationships.

Prerequisite: SOC 110 or 229, or consent of instructor. Alternate years.

444**SOCIAL THEORY**

The history of the development of sociological thought from its earliest philosophical beginnings is treated through discussions and reports. Emphasis is placed upon sociological thought since the time of Comte. *Prerequisite: SOC 110 or consent of instructor.*

470-479**INTERNSHIP (See index)**

Interns in sociology-anthropology typically work off campus with social service agencies under the supervision of administrators. However, other internship experiences, such as with the Lycoming County Historical Museum, are available. Interns in criminal justice work off campus in criminal justice agencies, such as penal institutions and probation and parole departments, under the supervision of administrative personnel.

N80-N89**INDEPENDENT STUDY (See index)**

An opportunity to pursue specific interests and topics not usually covered in regular courses. Through a program of readings and tutorials, the student will have the opportunity to pursue these interests and topics in greater depth than is usually possible in a regular course.

490-491**INDEPENDENT STUDY FOR
DEPARTMENTAL HONORS (See index)**



THEATRE (THEA)

Professor: R. Falk (Chairperson)

Associate Professor: Allen

Visiting Assistant Professors: Beetem, Jaffe

Part-time Instructors: Clark

The primary responsibilities of the Theatre Department are to teach appreciation, service, foundational and specialized courses; to prepare students for advanced study and training; and to sponsor worthwhile production programs in which students can practice the art and craft of theatre, and which will be a dynamic contribution to the cultural life of the College community.

Production groups sponsored by the Theatre Department are the Arena Theatre, The Arena Summer Theatre, The Emerald City Players, The Alpha Psi Omega Fraternity and the Downstage Theatre. Facilities used for performances by these groups are an

intimate thrust stage (The Arena) and a small black box studio theatre (The Downstage Theatre) in the Academic Center.

The department offers several courses to be selected for distribution requirements: THEA 100, 114, 148, 212, 332, 333, 335 (Fine Arts) THEA 333, 335 (Humanities and Literature).

The following courses have been approved to be offered as cultural diversity courses: THEA 114, 212, 332, 333, 335, 410. Students must check semester class schedules to determine which courses are offered as "D" courses for that semester.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: THEA 212, 332, 333. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Major

The major consists of the equivalent of 10 to 10.5 units. All theatre majors are required to complete the following: THEA 100, 148, 332, 333, 410 and the equivalent of 1 full unit of THEA 160 and/or 161 (6 units).

The department offers three major tracks:

Track I: ACTING (4.5 Units) THEA 140, 226, 240, 232 (1/2 unit); and one from the following: 335 or 402.

Track II: DIRECTING: (4.0 Units) THEA 140, 226, 336; and one from the following: 335 or 402.

Track III: DESIGN/TECH (4.5 Units) THEA 228, 229, 232 (1/2 unit), 320; and one from the following: 335, 402, 425, 428, 429, 431.

Majors are urged to include courses in art, music, psychology, and English, or other areas of special interest.

Majors are urged to include THEA 440 in Track I, THEA 426 in Track II, and THEA 430 in Track III.

Minors

Three minors are available in the Theatre Department.

- A minor in Performance consists of THEA 100, 140, 226, 240, 336.
- A minor in Technical Theatre consists of THEA 100, 148, 228, 229, and 320 or 430.
- A minor in Theatre History and Literature consists of THEA 100, 332, 333, 335 and 410.

100**INTRODUCTION TO THEATRE**

A comprehensive introduction to the aesthetics of theatre. From the spectator's point of view, the nature of theatre will be explored, including dramatic literature and the integral functioning of acting, directing and all production aspects. *Concurrent enrollment in THEA 148 prohibited.*

114**FILM ART: MOTION PICTURE MASTERPIECES**

Study of selected classic experimental and narrative films from around the world as well as from Hollywood. Consideration of what makes a classic through examination of such topics as acting, writing, directing, style, and genre.

135-136**INTRODUCTION TO DANCE I AND II**

An introduction to the techniques of basic movement and interpretation in ballet, jazz, and modern dance. Classes include improvisation and choreography. *Prerequisite for THEA 136: THEA 135 or consent of instructor. One-half unit of credit each. Not open to students who have received credit for MUS 135-136 or MUS 235-236.*

137**HISTORY OF THE DANCE I**

A survey of classical ballet from the *Ballets de cour* of 17th-century France to the

present with emphasis on the contributions of Petipa, Fokine, Cecchetti, and Balanchine.

One-half unit of credit. Not open to students who have received credit for MUS 137 or 138.

138**HISTORY OF THE DANCE II**

A survey of the forms of dance, excluding classical ballet, as independent works of art and as they have reflected the history of civilization from primitive times to the present. *Prerequisite: THEA 137 or consent of instructor. One-half unit of credit. Not open to students who have received credit for MUS 137 or 138.*

140**ACTING I**

An introductory study of the actor's preparation with emphasis on developing the actor's creative imagination through improvisations and scene study. *Prerequisite: THEA 100.*

148**PLAY PRODUCTION**

Stagecraft and the various aspects of production are introduced. Through material presented and laboratory work on the Arena Theatre productions, students will acquire experience with design, scenery, properties, costumes and lighting. *Prerequisite: THEA 100. Concurrent enrollment in THEA 100 prohibited.*

160**TECHNICAL THEATRE PRACTICUM****161****REHEARSAL AND PERFORMANCE PRACTICUM**

Supervised participation in the various aspects of technical production, rehearsal and performance of the Theatre Department's major presentations in the Arena Theatre. Credit for Theatre Practicum is earned on a

fractional basis. Students may register for one-half semester hour course credit per production for active participation in the designated area of technology and performance, limited to one semester hour credit per semester and eight semester hours credit over four years. Credit may not be used to satisfy distribution requirements in Fine Arts. Students may not register for Theatre Practicum while taking THEA 148 without permission of the instructor. When scheduling, students should register for Theatre Practicum in addition to the normal four academic courses. Because students may not be cast or assigned duties in time to meet the drop/add deadline, late registration for THEA 160 and 161 (Rehearsal and Performance) will be permitted without penalty.

212**MULTICULTURAL AMERICA ON SCREEN**

Introduction to the art of understanding moving images to discover the cultural values of American filmmakers and their audiences. Comparison of the ways in which films and television use comedy, drama, and the documentary to examine topics having to do with values, beliefs, and cultural diversity in America.

220**VOICE AND DICTION**

Introduction to the fundamental techniques of vocal production for the theatre. Emphasizes an individual program of personal vocal development. Dialects and phonetic study of the major European accents and English accents. Includes oral practice of relevant literature. *Alternate years. One-half unit of credit.*

226**DIRECTING I**

An introductory study of the function of the director in preparation, rehearsal and performance. Emphasis is placed on developing the

student's ability to analyze scripts, and on the development of the student's imagination. *Prerequisite: THEA 140. Alternate years.*

228**SCENE DESIGN**

Development of scene design techniques through study of the practice in rendering, perspective drawing, plan drafting, sketching and model building. Beginning work in theory, techniques, and practices in scenery painting for the theatre. Participation on Arena Theatre productions will be part of the classroom requirements. *Prerequisite: THEA 148.*

229**LIGHTING DESIGN**

The theory of stage and lighting design with emphasis on their practical application to the theatre. *Prerequisite: THEA 148.*

231**SUMMER THEATRE PRACTICUM**

Practical application in construction, design and production problems and techniques through laboratory and plays in production. *Prerequisite: THEA 148. Offered summer only.*

232**STAGE MAKEUP**

Essentials in stage makeup: straight, character, special types. Effects of light on makeup are included. Recommended for performers and directors of educational, church and community theatres. *Prerequisite: THEA 148. One-half unit of credit. Alternate Years.*

233**ADVANCED MAKEUP**

Advanced techniques in makeup design. Three-dimensional and prosthetic makeups are included, with emphasis on nonrealistic and nonhuman forms. *Prerequisite: THEA 232. One-half unit of credit. Alternate years.*

235-236**INTERMEDIATE DANCE I AND II**

Studies of the techniques of basic movement and interpretation in ballet, jazz, and modern dance at the intermediate level. Classes include improvisation and choreography. *Prerequisite for THEA 235: THEA 136 or consent of instructor. Prerequisite for THEA 236: THEA 235 or consent of instructor. One-half unit of credit each. Not open to students who have received credit for MUS 135-136 or MUS 235-236.*

240**ACTING II**

Continued practice in character analysis. The study of acting styles is introduced with a strong emphasis on performing Shakespeare's plays. *Prerequisite: THEA 140*

320**COSTUME DESIGN**

The theory of costuming for the stage, elements of design, planning, production and construction of costumes for the theatre. Students will participate in the construction of costumes for Arena Theatre productions. *Prerequisite: THEA 148 or consent of instructor.*

332**THEATRE HISTORY I**

A historical survey of Western and Non-Western styles of theatre from the beginning to the present. Included is a study of the evolution of theatre architecture and performance space as well as technical developments. *Alternate years.*

333**THEATRE HISTORY II: LITERATURE**

A study of the major dramatic literature that shapes the Western and non-Western theatre. Benchmark plays that are identified with specific periods and styles will be explored in depth. *Prerequisite: THEA 332.*

335**MODERN DRAMA**

A study of the major dramatic literature in depth that constitutes the body of the modern theatre, from 1875 to the present. Included will be a survey of alternative theatre styles, both scripted and non-scripted. Ethnic, minority and contemporary problem plays will be surveyed as well.

336**DIRECTING II**

Emphasis is placed on the student's ability to function as a director in the rehearsal process. Practical experience involves the directing of two one-act plays from the contemporary theatre in the Downstage Theatre. *Prerequisite: THEA 226.*

337**PLAYWRITING**

An investigation of the techniques of playwriting with an emphasis on creative writing, culminating in a written one-act play. *Prerequisite: ENGL 106 or 107 and THEA 226. Alternate years.*

402**SHAKESPEARE ON STAGE**

A study of Shakespeare's plays in production terms. Emphasis will be on translating works from the page to the stage, with special attention to language, poetry, acting styles as well as technical problems. Contemporary productions will be viewed

410**THEATRE AND CULTURE**

Exploration of one or more historic periods in a specific locale to discover the nature of the theatre in its cultural context. Included will be a study of the art, music, literature, political and social framework of the period and locale. *Prerequisite: THEA 332 and 333.*

425**ADVANCED COSTUME DESIGN STUDIO**

Practical application of costume design for the studio or main stage productions.

Prerequisite: THEA 320 and consent of instructor. May be repeated for credit.

426**DIRECTING III**

Emphasis will be placed on the student's ability to produce a major three-act play from the script to the stage for public performance.

Prerequisite: THEA 336.

428**ADVANCED SCENE DESIGN STUDIO**

Practical application of scene design for the studio or main stage productions. *Prerequisite: Consent of instructor. May be repeated for credit.*

429**ADVANCED LIGHTING DESIGN STUDIO**

Practical application of lighting design for the studio or main stage productions. *Prerequisite: Consent of instructor. May be repeated for credit.*

430**PROPERTY DESIGN**

The theory of properties design for the stage, including the production of specific properties for staging use. Elements of design, fabrication, and the construction of properties employing a variety of materials and application of new theatrical technology. *Prerequisites: THEA 228 and 320. Alternate years.*

431**ADVANCED PROPERTY DESIGN STUDIO**

Practical application of properties design for studio or main stage productions. *Prerequisite: THEA 430 and consent of instructor. May be repeated for credit.*

440**ACTING III**

Preparation of monologues and two character scenes, contemporary and classical, and preparation of a professional acting audition. The student will appear in major campus productions. *Prerequisite: THEA 240.*

441**ADVANCED ACTING STUDIO**

Practical application of acting for studio or main stage productions. *Prerequisite: THEA 240 and consent of instructor. May be repeated for credit.*

444**ADVANCED DIRECTING STUDIO**

Practical application of directing for studio or main stage productions. *Prerequisite: Consent of instructor and THEA 336. May be repeated for credit.*

470 - 479**INTERNSHIP (See Index)**

Students in the theatre work off campus in theatres such as the Guthrie Theatre, Minneapolis, and the Hartford Stage and the Trinity Repertory.

N80/N89**INDEPENDENT STUDIES (See Index)**

Subjects for Independent Studies are chosen in conjunction with faculty members.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS**

Students who qualify for Departmental Honors will produce a major independent project in research or technical theatre.



WOMEN'S STUDIES

(WMST)

Professor: Jensen (co-Director)

Assistant Professor: Ross (co-Director)

Although a major in women's studies is available only under the policies regarding Individual Interdisciplinary Majors (page 36), an established minor in women's studies is provided. WMST 200 and four of the following courses are required for the minor.

ART 339 Women in Art

ENGL 334 Women and Literature

HIST 310 Women in History

PSCI 347 Women and Politics

PSY 341 Psychology of Women

SOC 331 Sociology of Women

WMST 300 Topics in Women's Studies

With the approval of the coordinator, an appropriate special course or independent studies project may be substituted for one of the four courses required for the minor. To receive credit for a minor in women's studies, a student must maintain at least a 2.00 average in courses taken for that minor.

The following course has been approved to be offered as a cultural diversity course: WMST 200. Students must check semester class schedules to determine which courses are offered as "D" courses for that semester.

200

ISSUES IN WOMEN'S STUDIES

An examination of women's issues from an interdisciplinary perspective. The course will explore the social construction of gender, feminist research methods and theories, and the role of patriarchy in women's lives. Topics may involve language, art, science, politics, culture, violence, race, class, ethnic differences, sexuality, and pornography.

300

TOPICS IN WOMEN'S STUDIES

An examination of selected topics in Women's Studies designed to allow students to pursue particular subjects in more depth and detail than in the general introductory course. With the permission of the Coordinator of the Women's Studies Program students may repeat this course depending on the content.

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Planned Giving Consultant

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- **** On Sabbatical Calendar Year 2001

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Education

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*B.A., Lycoming College**M.S., Bucknell University**M.B.A., Long Island University**C.P.A. (Pennsylvania and New York)***Fredric M. Wild, Jr. (1978)**

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*B.A., Emory University**M. Div., Yale Divinity School**M.A., Ph.D., Ohio State University***David S. Witwer (1994)**

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*B.S., M.S., The Pennsylvania State University***Robin Knauth (1999)**

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*A.B., Princeton University**M.T.S., Regent College***Visiting, Special, and Part-time Appointments****Diane Abercrombie (1988)**

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CUNY***Mark Anderman**

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*B.A., Lycoming College**M.A., The Pennsylvania State University***Katharine Cimini (1992)**

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*B.A., Lycoming College**M.A., College of William and Mary***Joan Moyer Clark (1987)**

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*B.A., Rosemont College**M.S., Bucknell University***Harry Davis (1994)**

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at Albany**M.S.N., University of Pennsylvania***Danielle Goodyear (2000)**

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*B.S.N., M.S.N., Villanova University***Evelyn R. Hayden (2000)**

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*B.S., Southern Illinois University**M.Ed.Ed., Northern Arizona University***Dorothy Hoy (1993)**

Nursing

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ALUMNI ASSOCIATION



The Alumni Association of Lycoming College has a membership of over 13,000 men and women. It is governed by an Executive Board consisting of 24 members-at-large. The Board includes members representing various class years and geographic areas, the senior class president, the current student body president, and past presidents of the last graduating class and the Student Senate of Lycoming College. The Director of Alumni and Parent Programs manages the activities of the Alumni Office.

The Alumni Association has the following purpose as stated in its constitution: "As an off-campus constituency, the association's purpose is to seek ways of maintaining an active and mutually beneficial relationship between the College and its alumni, utilizing their talents, resources, and counsel to further the objectives and programs of Lycoming College."

All former students of Williamsport Dickinson Seminary and all former students who have successfully completed one year of study at Williamsport Dickinson Junior College or Lycoming College are considered members of the association.

Acting as the representative of alumni on the campus and working also with undergraduates, the Alumni Office is responsible for keeping alumni informed and interested in the programs, growth, and activities of the College through regular publications mailed to all alumni on record. Arrangements for Homecoming, Class Reunions, club meetings, and similar activities are coordinated through this Office. Through the Lycoming College Annual Fund, the Alumni office is closely associated with the development program of the College. Communications to the Alumni Association should be addressed to the Alumni and Parent Programs Office.

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Director of College Relations:

Public information; publications; sports information; media relations

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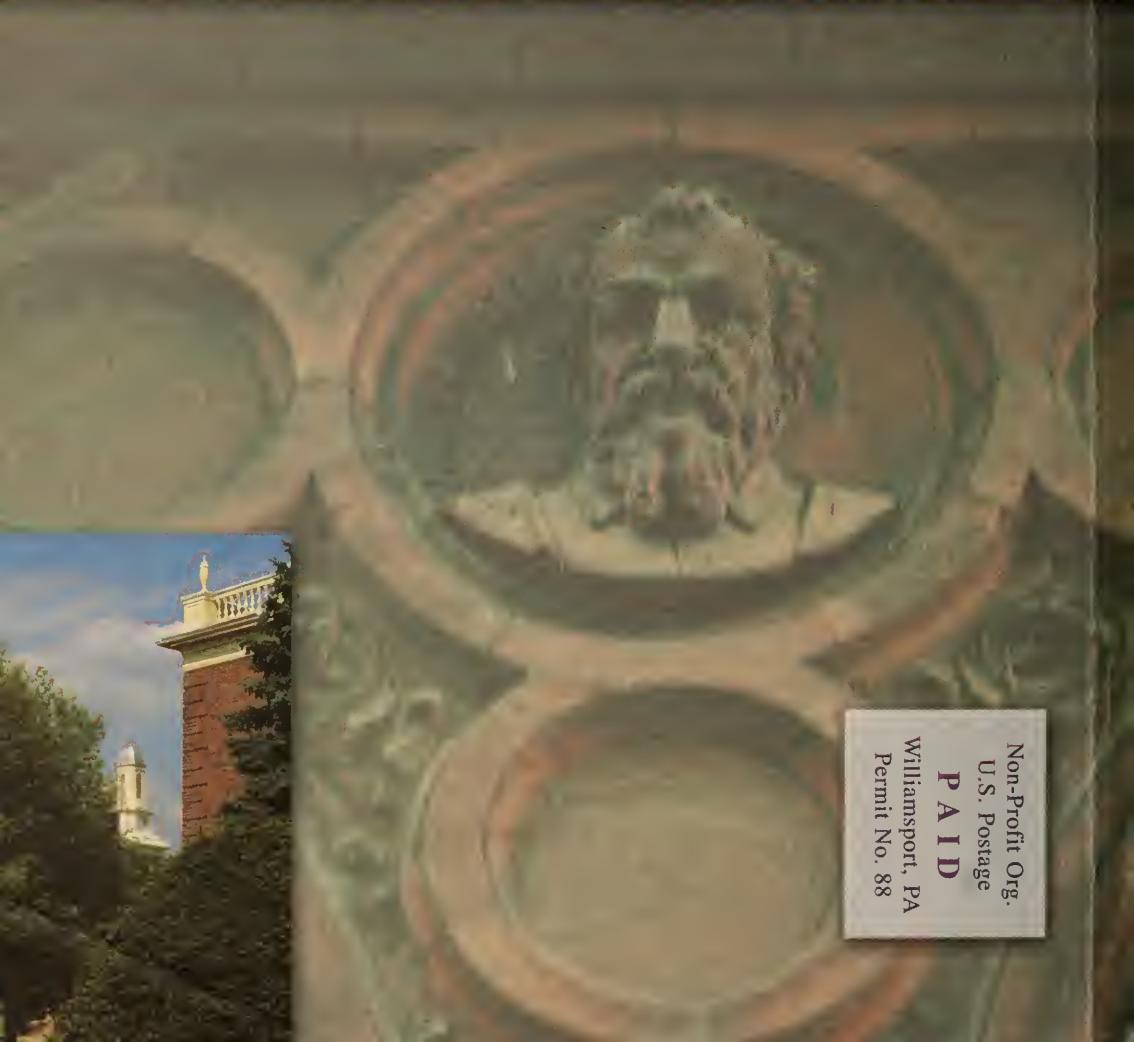
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